LAPSNAPPER

USER MANUAL

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PREFACE

Congratulations on your purchase of the LapSnapper!

The purpose of this user manual is to help you by offering relevant information and to assist you in using the LapSnapper. Please read this manual carefully before using the product.

LapSnapper is an innovative, wireless and portable lap timing system, which is capable of managing practice, qualifying and race sessions and measuring and recording lap, sector and split times. LapSnapper Pro can be also used in personal training as a lap timer. LapSnapper can be easily moved from one place to another because it is wireless and does not require external power supply or cables.

LapSnapper is also capable of sharing measured lap, sector and split times to LapSnapper Personal or Pro Clients via a Wi-Fi service. LapSnapper Personal or Pro Clients are portable smart devices which are running the LapSnapper Personal or Pro Client Software for Android.

The LapSnapper is suitable for a huge variety of motorsports.

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1. INTRODUCTION

1.1. WARNINGS

Although the LapSnapper is a precision electronic lap timing aid, any lap timing aid can be misused or misinterpreted, and therefore become unsafe. You use these products at your own risk. To reduce the risk, carefully review and understand all aspects of this user manual before using LapSnapper.

The LapSnapper Decoder and Transponder uses 2.4 GHz short-range wireless technology, and other radio devices which are operating at the same frequency may affect the functionality of the LapSnapper. These effects on the functionality of the LapSnapper can be avoided by keeping 2–5 metres away from other radio devices operating at the same frequency of 2.4 GHz.

1.2. LIMITED WARRANTY

This LapSnapper product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, LapSnapper will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labour, provided that the customer shall be responsible for any transportation cost. This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in material or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by servicing performed by anyone who is not an authorised service provider of LapSnapper; or (v) damage to a product that has been modified or altered without the written permission of LapSnapper. In addition, LapSnapper reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country.

This product is intended to be used only as a lap timing aid and must not be used for any purpose requiring precise measurement of time.

1.3. TERMINOLOGY

Smart device Tablet or smart phone which is running on the Android® operating system

2. OVERVIEW

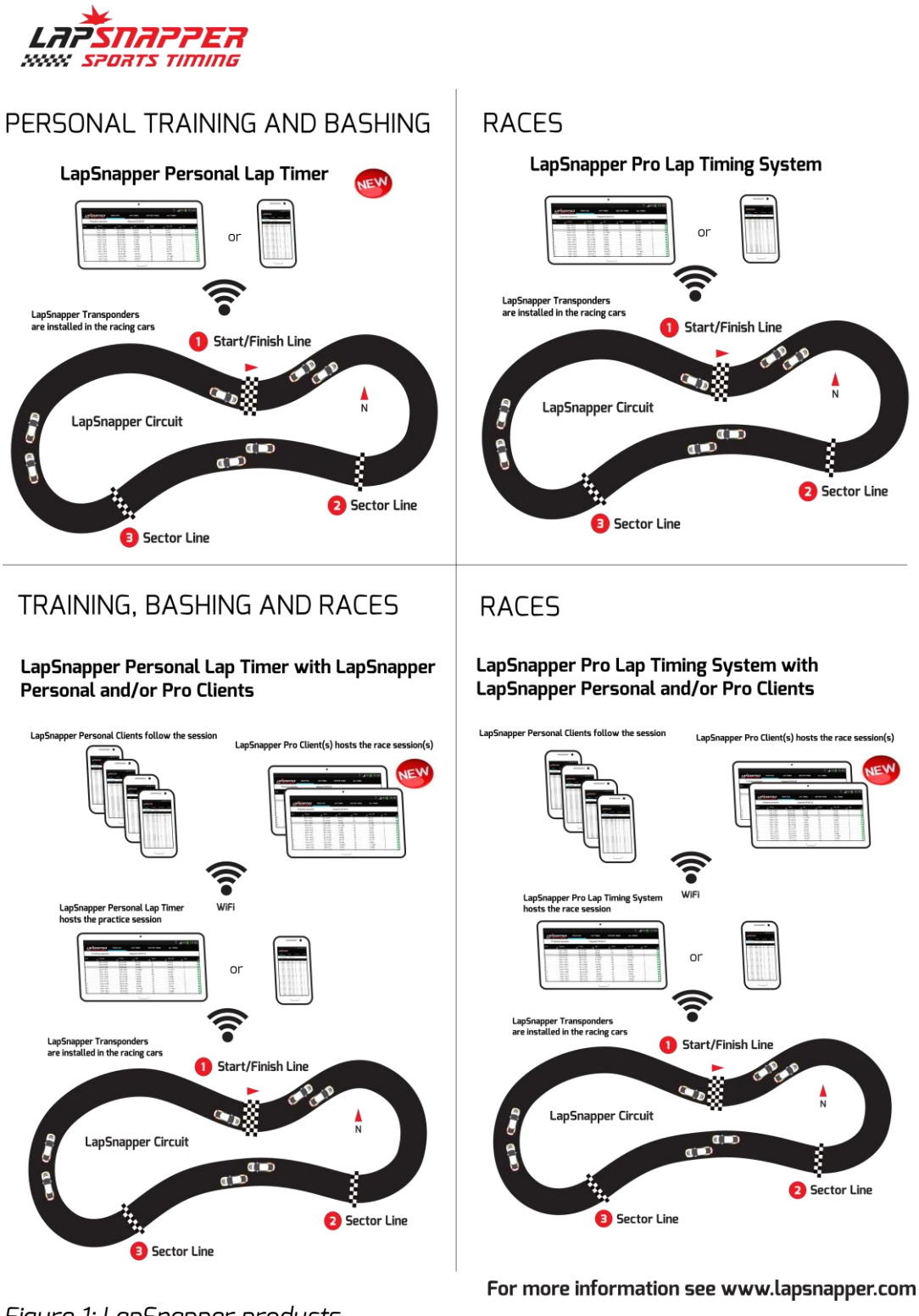

Figure 1: LapSnapper products

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The LapSnapper product include a Decoder, Transponder, LapSnapper Lap Timing Software for Android, and LapSnapper Magnetic Strips which are embedded into the race track or which are installed above the race track. Based on proven technology, the LapSnapper measures and records lap, sector and split times simultaneously for multiple drivers, and manages practice, qualifying and race sessions. LapSnapper is capable of sharing measured lap, sector and split times to multiple LapSnapper Personal and Pro Clients via a Wi-Fi service. LapSnapper Personal and Pro Clients are portable smart devices running on Android®. The LapSnapper can be also used in personal training as a lap timer, because multiple LapSnapper products can be used at the same time on the same trace track.

The LapSnapper Magnetic Strips are used to detect the start/finish and sector lines. The LapSnapper Magnetic Strips should be installed into the ground/floor or above the race track. The maximum number of start/finish and sector lines is three, which makes it possible to have one start/finish line and two sector lines. LapSnapper Magnetic Strips are passive and do not require an external power supply. Multiple LapSnapper products can use the same magnetic strips at the same time. Please see section 9.13 Multiple lap timing systems on the same race track.

The LapSnapper Transponder is used to identify the drivers. The transponders each have a unique ID, the Transponder ID. Each driver at the race track must have their own LapSnapper Transponder. The Transponder detects when the vehicle passes over the magnetic strips that are embedded in the race track and forwards this information to the LapSnapper Decoder using short-range wireless technology. LapSnapper Transponders are relatively small electric devices and they do not require an external power supply.

Each smart device which is running the practice, qualifying or race sessions must have its own LapSnapper Decoder. The LapSnapper Decoder receives information from the LapSnapper Transponder that the driver has passed the start/finish or sector line and it forwards this information to the LapSnapper Lap Timing Software. The LapSnapper Decoder is a USB dongle, which can be connected to the smart device's USB OTG or USB 2.0 interface. The LapSnapper Decoder gets its electric power from the smart device's USB interface.

Each smart device which is hosting the lap timing must have the LapSnapper Lap Timing Software installed. The LapSnapper Lap Timing Software communicates with the LapSnapper Decoder and Clients and hosts the lap timing.

LapSnapper Personal and Pro Clients communicate with the LapSnapper Lap Timing System via a Wi-Fi service. LapSnapper Personal and Pro Clients are able to show, record and save lap, sector and split times received from the LapSnapper Lap Timing System. LapSnapper Personal Clients are not able to host race and qualifying sessions.

3. SYSTEM REQUIREMENTS

	LAPSNAPPER PERSONAL LAP TIMER AND PRO	LAPSNAPPER PERSONAL AND PRO CLIENT
GENERAL		
• Device type	Smart device	Smart device
• Android operating system	4.0 or newer	4.0 or newer
DISPLAY		
• Minimum physical size	4.0 inches	4.0 inches
• Minimum resolution	480 x 800 pixels	480 x 800 pixels
• Multi touch	Yes	Yes
MEMORY		
• Minimum system memory	512 MB RAM	512 MB RAM
• Minimum build in memory	1 GB	1 GB
• Storage expansion	Micro SD	
DATA		
• WLAN (Wi-Fi 802.11 b/g/n)	○	●
• Wi-Fi hotspot	○	
• USB 2.0 or Micro USB OTG	●	

● = The feature is required by the product
○ = Optional feature

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4. TECHNICAL SPECIFICATION

FEATURE	LAPSNAPPER PERSONAL LAP TIMER	LAPSNAPPER PERSONAL CLIENT SOFTWARE	LAPSNAPPER PRO	LAPSNAPPER PRO CLIENT SOFTWARE
CONTENTS OF PRODUCT PACKAGE				
· LapSnapper Personal Lap Timer Software for Android	●		○	
· LapSnapper Personal Client Software for Android	○	●	○	
· LapSnapper Pro Lap Timing Software for Android	○		●	
· LapSnapper Pro Client Software for Android	○		○	●
· LapSnapper Decoder	●		●	
· LapSnapper Transponder	●		○	
· Magnetic Strip (Start/finish and sector lines)	1.2 m		○	
TECHNICAL SPECIFICATION OF LAP TIMING				
· Lap timer or lap timing system	●		●	
· Wireless and mobile system with automatic setup	●	●	●	●
· Timing of Practice session	●	●	●	●
· Timing of Qualifying session			●	●
· Timing of Race session			●	●
· Lap times	●	●	●	●
· Sector times	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs
· Split times	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs
· Accuracy of timing *	± 0.001 s	± 0.001 s	± 0.001 s	± 0.001 s
· Maximum session time	Unlimited	Unlimited	Unlimited	Unlimited
· Maximum speed of crossing the start/finish line	160 km/h	N/A	160 km/h	N/A
· Maximum distance of Decoder from line	Up to 20 m	N/A	Up to 20 m	N/A
· Supports sending measured times to LapSnapper Personal and Pro Clients via WiFi	●		●	
· Supports receiving measured times from LapSnapper Personal Lap Timer or Pro Lap Timing System via WiFi		●		●
FEATURES OF SOFTWARE				
· No annual fee or other extra charges	●	●	●	●
· Compatibility of software	Android 4.0 >	Android 4.0 >	Android 4.0 >	Android 4.0 >
· Timing of Practice session	●	●	●	●
· Timing of Qualifying session			●	●
· Timing of Race session			●	●
· Maximum session time	Unlimited	Unlimited	Unlimited	Unlimited
· Lap times	●	●	●	●
· Sector times	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs
· Split times	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs	Max. 3 pcs
· Multiple possibilities to browse lap and sector times	●	●	●	●
· Selection of drivers to monitor	●	●	●	●
· Personal view for training	●	●	●	●
· Minimum lap time	●	●	●	●
· Removal and split of erroneous lap times and restoring of removed or splitted lap times (Edit times view)	●	●	●	●
· Timing of the session can be stopped manually	●	●	●	●
· Timing of the session can be stopped on the basis of the session time or number of laps	●		●	●
· Naming of transponders and drivers	●	●	●	●
· Speech synthesizer (Best lap, personal best lap,	●	●	●	●

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etc.)				
• Automatic storing of session results to file	•	•	•	•
• Session results can be loaded to software afterwards	•	•	•	•
• Automatic generation of a session result report in PDF format	•	•	•	•
• Automatic sending of session result report to drivers by e-mail	•	•	•	•
• Supports multiple Decoders in same session (1 host Decoder and multiple slave Decoders)	•		•	
• Recovery of session and timing after software crash	•	•	•	•
• Supports renaming Transponders	•		•	
• Supports checking Transponder battery voltage	•		•	
TECHNICAL SPECIFICATION OF LAPSNAPPER DECODER				
• Accuracy of timing *	± 0.001 s		± 0.001 s	
• Decoder has been calibrated against accurate clock source at factory *	•		•	
• Maximum session time	Unlimited		Unlimited	
• Maximum distance of Decoder from start/finish line	Up to 20 m		Up to 20 m	
• Supports multiple Decoders in same session (1 host Decoder and multiple slave Decoders)	•		•	
• Interface	USB OTG 2.0		USB OTG 2.0	
• Supply voltage (From USB)	5 V		5 V	
• Nominal operation time	Smart device operation time		Smart device operation time	
• IP rating (Protected against dust and dripping water)	IP51		IP51	
• Size (L x W x D)	58 x 20 x 11.5 mm		58 x 20 x 11.5 mm	
• Weight	10 g		10 g	
• Recommended temperature range	-10° C - +50° C		-10° C - +50° C	
TECHNICAL SPECIFICATION OF LAPSNAPPER TRANSPONDER, RC				
• Compatible with scales	1:16 and larger			
• Accuracy of timing *	± 0.001 s			
• Transponder has been calibrated against accurate clock source at factory *	•			
• Detection technology ***	Magnetic strip			
• Maximum detection height of Transponder from start/finish line (Depends on selected magnetic strip)	100 - 130 mm			
• Interface to Decoder	Wireless			
• Unique Transponder ID	•			
• Naming of Transponder (Maximum name lenght is 16 characters)	•			
• Supply voltage (Internal CR2032 battery)	3 V			
• Nominal operation time **	3 years			
• IP rating (Protected against dust "dust tight" and long durable period of immersion in water)	IP68 (0.5 m)			
• Size (L x W x D)	27.5 x 27.5 x 9 mm			
• Weight	8 g			
• Recommended temperature range	-10° C - +50° C			
TECHNICAL SPECIFICATION OF LAPSNAPPER TRANSPONDER, RC INDOOR				
• Compatible with scales	1:24 and larger			
• Accuracy of timing *	± 0.001 s			
• Transponder has been calibrated against accurate	•			

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clock source at factory *				
• Detection technology ***	Magnetic strip			
• Maximum detection height of Transponder from start/finish line (Depends on selected magnetic strip)	100 - 130 mm			
• Interface to Decoder	Wireless			
• Unique Transponder ID	•			
• Naming of Transponder (Maximum name lenght is 16 characters)	•			
• Supply voltage (Internal CR2032 battery)	3 V			
• Nominal operation time **	3 years			
• IP rating (Protected against dust "dust tight" and long durable period of immersion in water)	IP68 (0.5 m)			
• Size (L x W x D)	30 x 27.5 x 9 mm			
• Weight	7 g			
• Recommended temperature range	-10° C - +50° C			
TECHNICAL SPECIFICATION OF LAPSNAPPER TRANSPONDER, KARTING				
• Accuracy of timing *	± 0.001 s			
• Transponder has been calibrated against accurate clock source at factory *	•			
• Detection technology ***	Magnetic strip			
• Maximum detection height of Transponder from start/finish line (Depends on selected magnetic strip)	100 - 130 mm			
• Interface to Decoder	Wireless			
• Unique Transponder ID	•			
• Naming of Transponder (Maximum name lenght is 16 characters)	•			
• Supply voltage (Internal CR2032 battery)	3 V			
• Nominal operation time **	3 years			
• IP rating (Protected against dust "dust tight" and long durable period of immersion in water)	IP68 (0.5 m)			
• Size (L x W x D)	50 x 35 x 15 mm			
• Weight	18 g			
• Recommended temperature range	-10° C - +50° C			
OTHER				
• Warranty	12 months	12 months	12 months	12 months

● = The feature is included in the product

○ = Optional feature

* Accuracy of timing is valid maximally 60 minute lap time. Lap timing system has been calibrated at a temperature of +20° C and calibration time is 60 minutes

** Nominal Transponder operation time depends on the amount of usage rate

*** Magnetic strips are embedded into the race track or magnetic strips are installed top of the finishing line

**** Requires only one start/finish or sector line to be within radio coverage

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5. INSTALLATION

5.1. INSTALLATION OF LAPSNAPPER LAP TIMING SOFTWARE

Step 1: Go to the Settings of the smart device, select Security Settings and allow installation of applications from sources other than the Play Store.

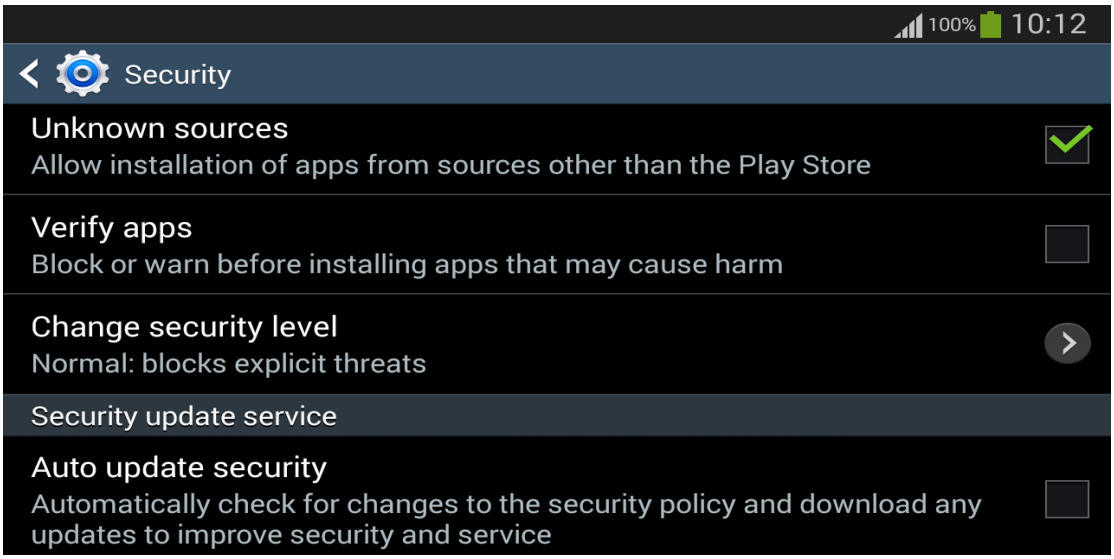
100% 10:12
Security
Unknown sources
Allow installation of apps from sources other than the Play Store
Verify apps
Block or warn before installing apps that may cause harm
Change security level
Normal: blocks explicit threats
Security update service
Auto update security
Automatically check for changes to the security policy and download any updates to improve security and service

Figure 2: Security settings of the smart device

Step 2: Insert the LapSnapper Micro SD card into the smart device and go to the root folder for the Micro SD card by using the smart device's file manager. Double click on the LapSnapperPersonalLapTimer.apk or LapSnapperPro.apk file.

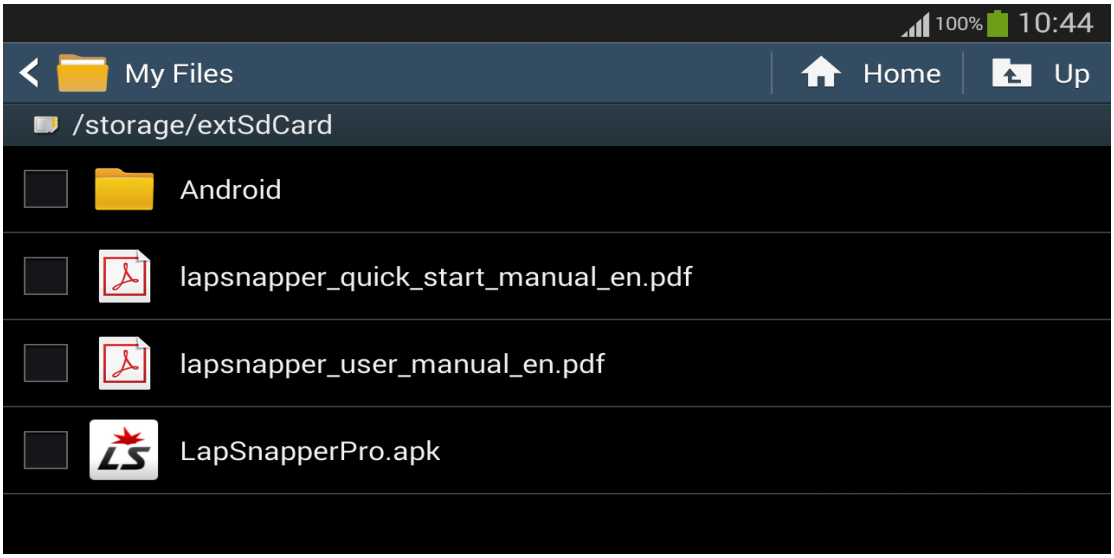

Figure 3: Root folder for the LapSnapper Micro SD card.

Step 3: Start installation of the LapSnapper Lap Timing Software by selecting Install and wait for a few minutes.

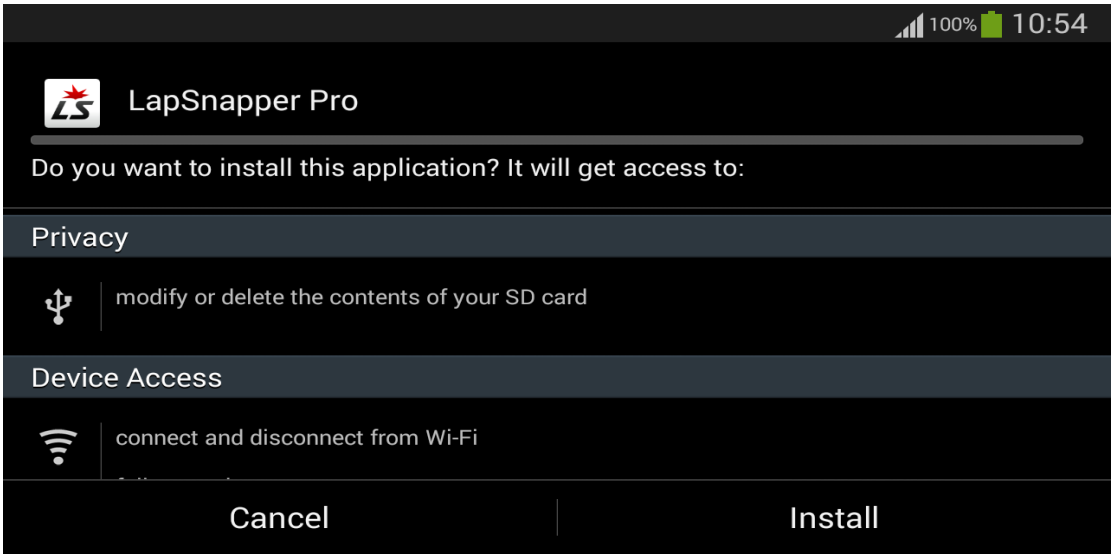

Figure 4: Starting software installation

Step 4: Select open

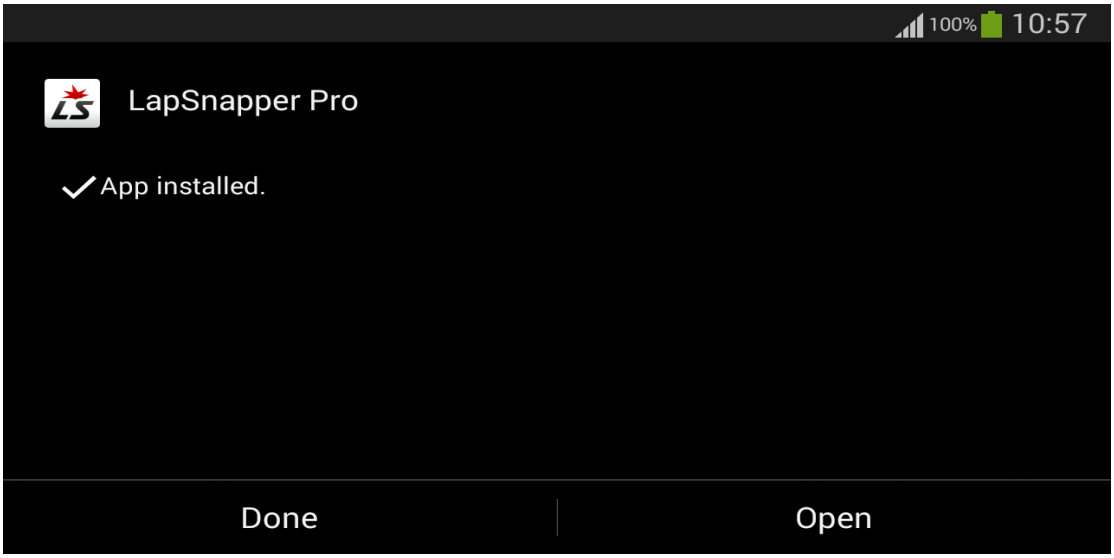

Figure 5: Confirmation that LapSnapper Lap Timing Software has been installed

Step 5: Enter the product key, which consists of four eight-digit numbers. The product key can be found on the LapSnapper Micro SD card in the file LapSnapperProductKey.txt.

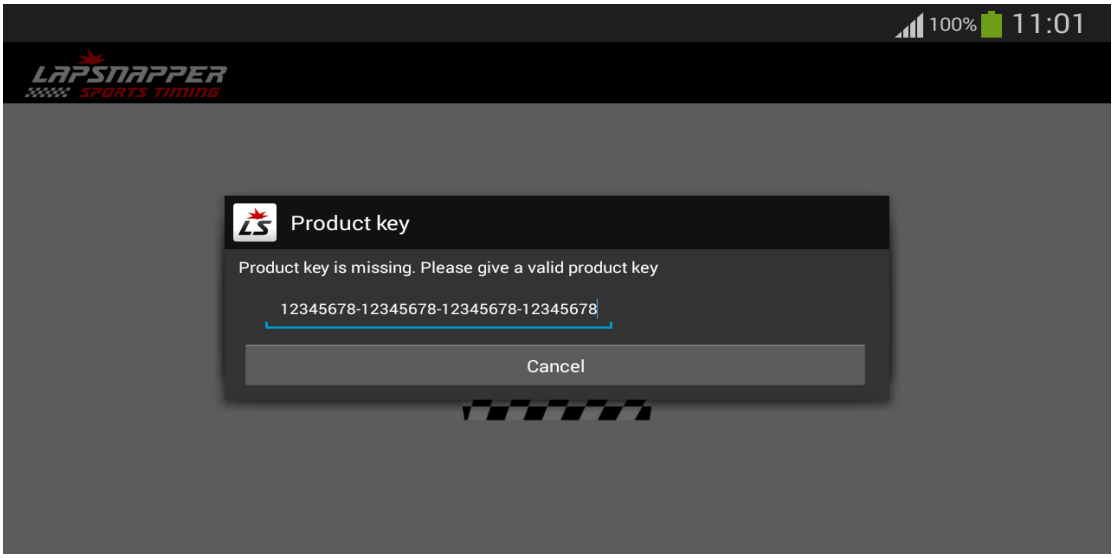

Figure 6: Enter the product key

Step 6: The main menu will appear. The LapSnapper Lap Timing Software is now installed on the smart device!

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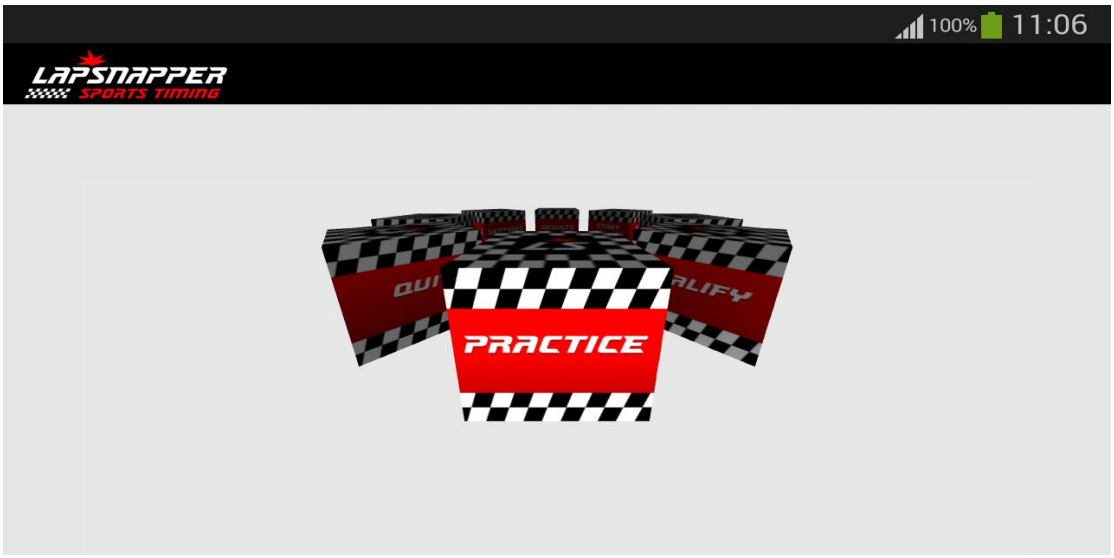

Figure 7: Main menu for the LapSnapper Lap Timing Software

5.2. INSTALLATION OF LAPSNAPPER DECODER

Step 1: *Connect the LapSnapper Decoder to the USB OTG port of the smart device using a Micro USB OTG to USB 2.0 adapter.*

Step 2: *The LapSnapper Lap Timing Software requests permission to open LapSnapper Lap Timing Software automatically when the LapSnapper Decoder is connected. Select Use by default for this USB device and press OK.*

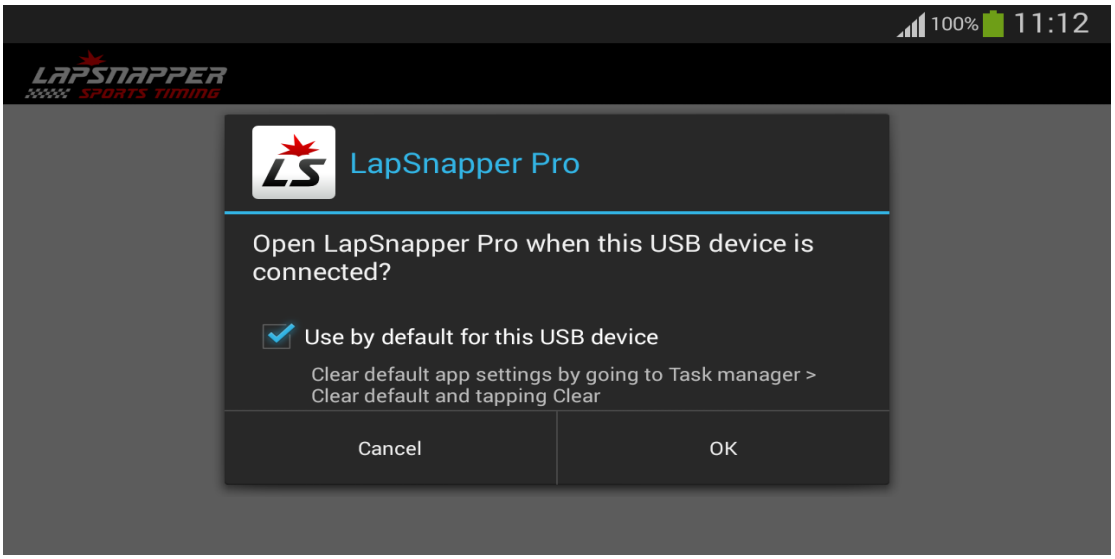
100%
11:12
LapSnapper Pro
Open LapSnapper Pro when this USB device is connected?
Use by default for this USB device
Clear default app settings by going to Task manager > Clear default and tapping Clear
Cancel
OK

Figure 8: Permission request to open LapSnapper Lap Timing Software automatically when the LapSnapper Decoder is connected

Step 3: The main menu is shown on the screen. The LapSnapper Decoder is now installed!

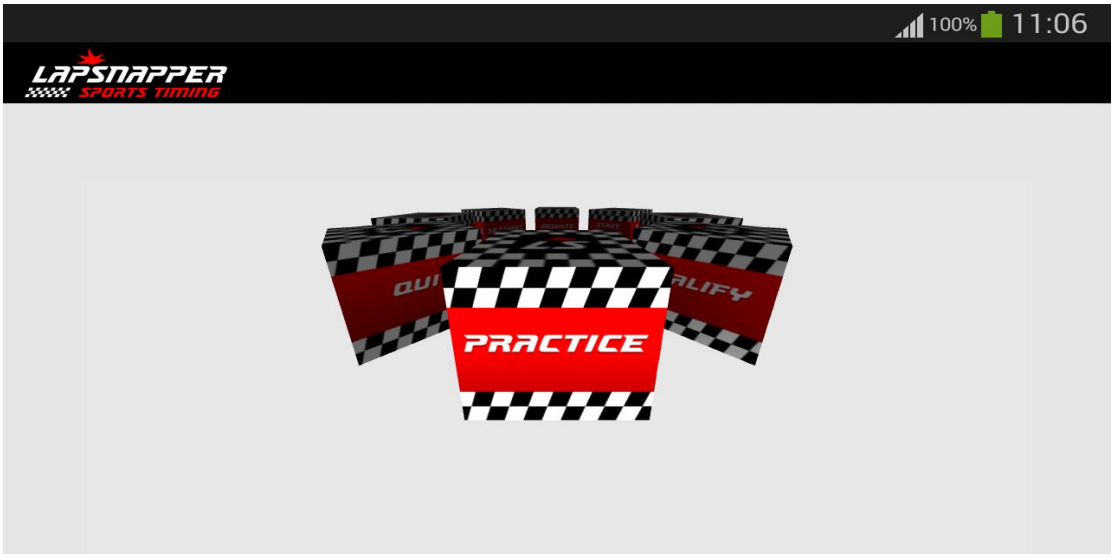

Figure 9: Main menu for the LapSnapper Lap Timing Software

5.3. INSTALLATION OF LAPSNAPPER TRANSPONDER

Step 1: *Find a suitable installation place in the racing car for the LapSnapper Transponder. Normally, the Transponder is installed on the base plate of the racing car, where it is protected from water, dirt and shocks.*

Tips:

- *Areas below and above the Transponder may not be made of metal due signal do not pass through metal. Signal passes through plastics, aluminium and carbon fiber.*
- *Please always take account of the maximum detection distance of the selected magnetic strip (= Maximum distance between Transponder and magnetic strip).*

Step 2: *Install the LapSnapper Transponder to the selected place using double-sided tape, screws or cable ties. Please note that the label on the transponder has an arrow, which must point forward or backward.*

Step 3: *Test that the Transponder works reliably.*

Step 4: *The LapSnapper Transponder is now installed!*

5.4. INSTALLATION OF LAPSNAPPER MAGNETIC STRIPS

Step 1: Find suitable places for the start/finish and sector lines on the race track.

Step 2: Decide the width of the start/finish and sector lines and calculate how many LapSnapper Magnetic Strip Modules are needed.

Step 3: Install LapSnapper Magnetic Strip Modules at the start/finish and sector lines by burying them in the ground or fixing them on the floor or installing them above the start/finish and sector lines

Step 4: The LapSnapper Magnetic Strips are now installed!

Please note that the magnets have to reject each other, otherwise the system will not work properly.

5.5. INSTALLATION OF LAPSNAPPER PERSONAL AND PRO CLIENT SOFTWARE

Step 1: Go to the Settings of the smart device, select Security Settings and allow installation of applications from sources other than the Play Store.

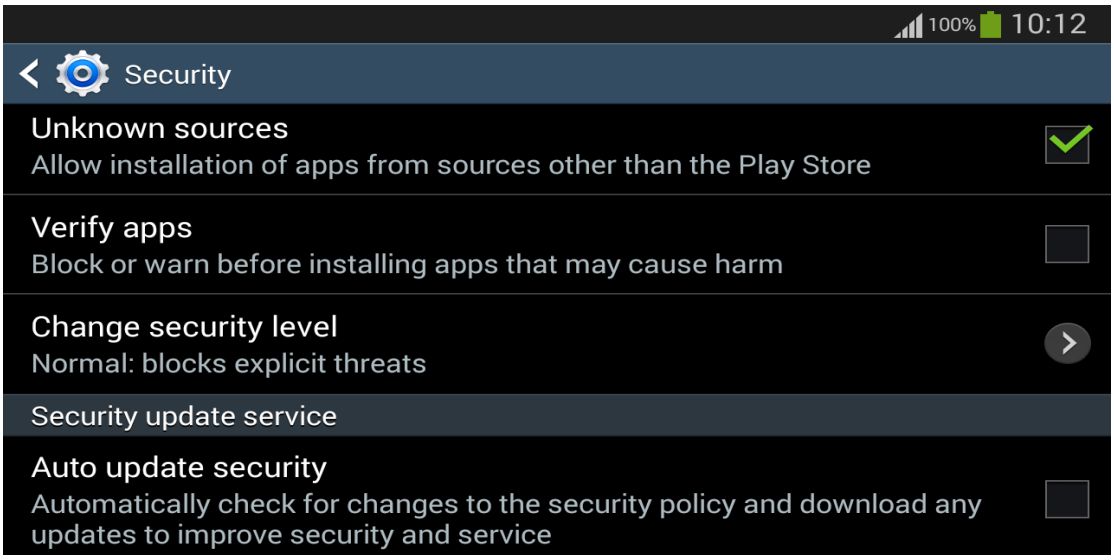
100%
10:12
Security
Unknown sources
Allow installation of apps from sources other than the Play Store
Verify apps
Block or warn before installing apps that may cause harm
Change security level
Normal: blocks explicit threats
Security update service
Auto update security
Automatically check for changes to the security policy and download any updates to improve security and service

Figure 10: Security Settings of the smart device

Step 2: Go to the LapSnapper Online Shop and buy the LapSnapper Personal or Pro Client. LapSnapper sends the download link and product key by email when a purchase has been paid for.

Step 3: Download the LapSnapper Personal or Pro Client Software to the smart device using the download link from the smart device's email client.

Step 4: Go to the Download folder of the smart device using its file manager. Double click on the LapSnapperPersonalClient.apk or LapSnapperProClient.apk file.

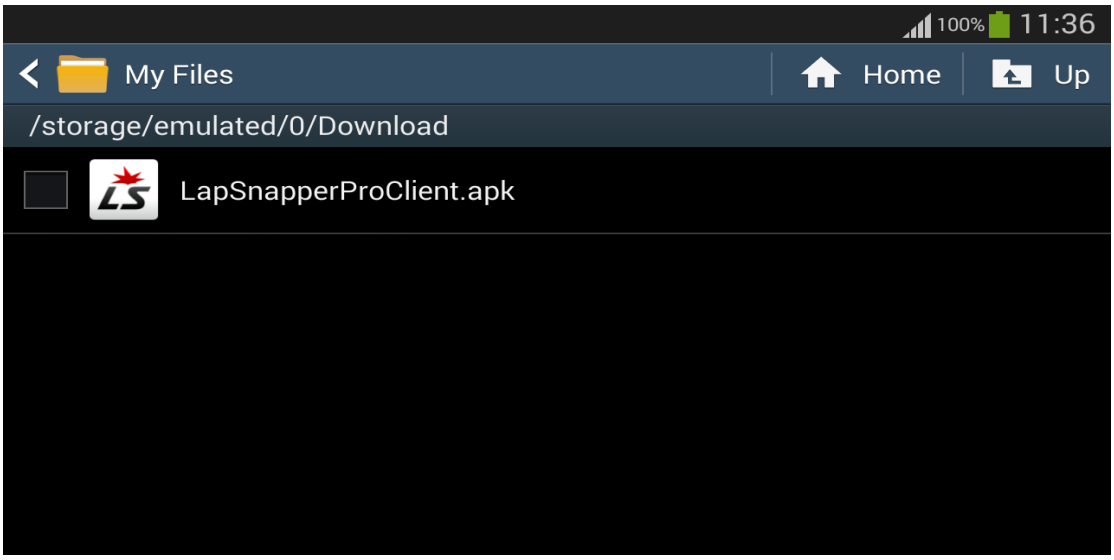

Figure 11: Download folder of the smart device

Step 3: Start installation of the LapSnapper Personal or Pro Client Software by selecting Install and wait for a few minutes.

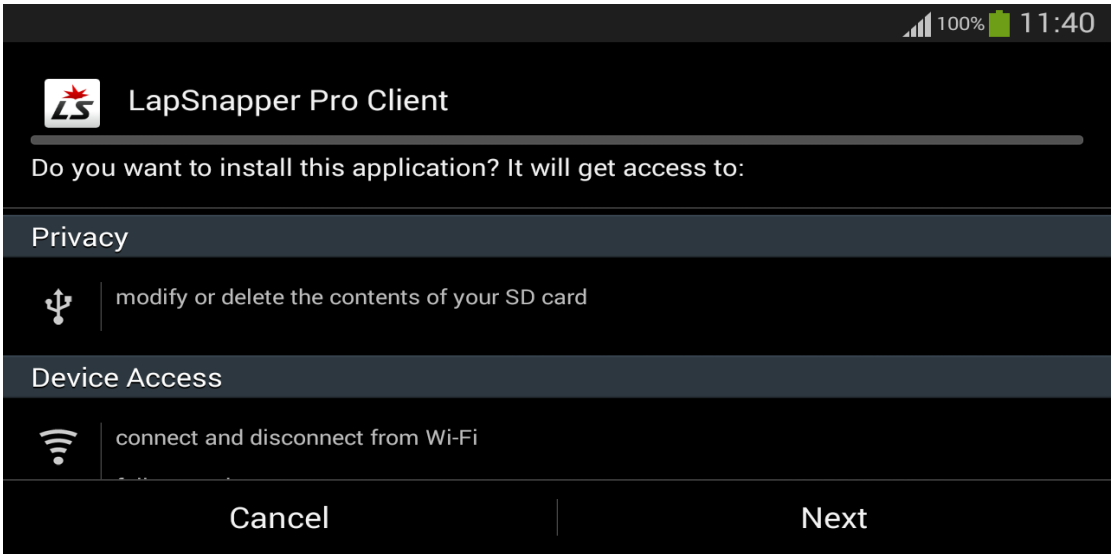
100% 11:40
LapSnapper Pro Client
Do you want to install this application? It will get access to:
Privacy
modify or delete the contents of your SD card
Device Access
connect and disconnect from Wi-Fi
Cancel
Next

Figure 12: Starting software installation

Step 4: Select Open

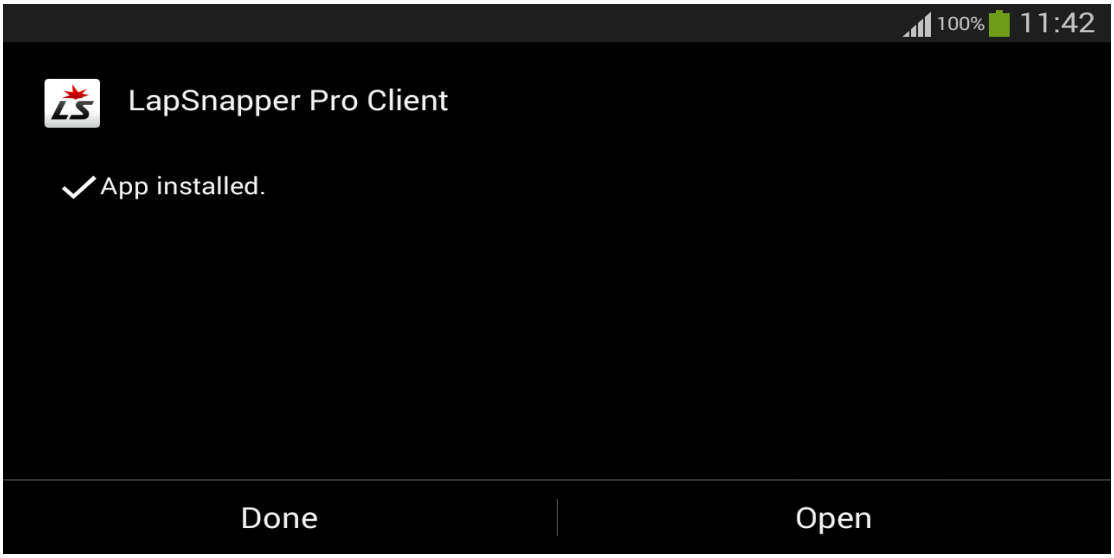

Figure 13: Confirmation that the LapSnapper Personal or Pro Client Software has been installed

Step 5: Enter the product key, which consists of four eight-digit numbers. The product key can be found from Email sent to you after purchase has been paid for.

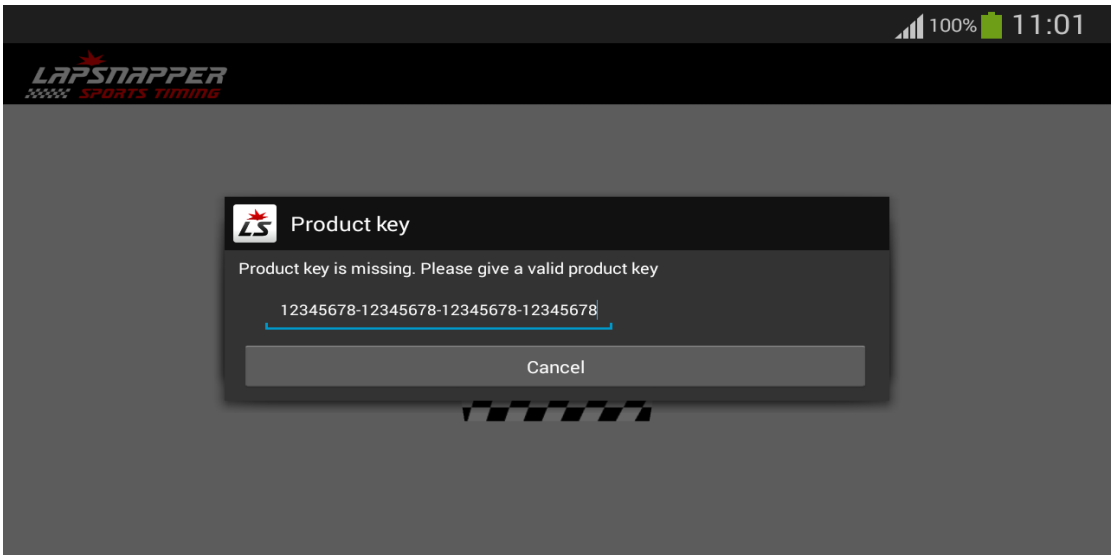

Figure 14: Enter the product key

Step 6: The main menu will appear. The LapSnapper Personal or Pro Client Software is now installed on the smart device!

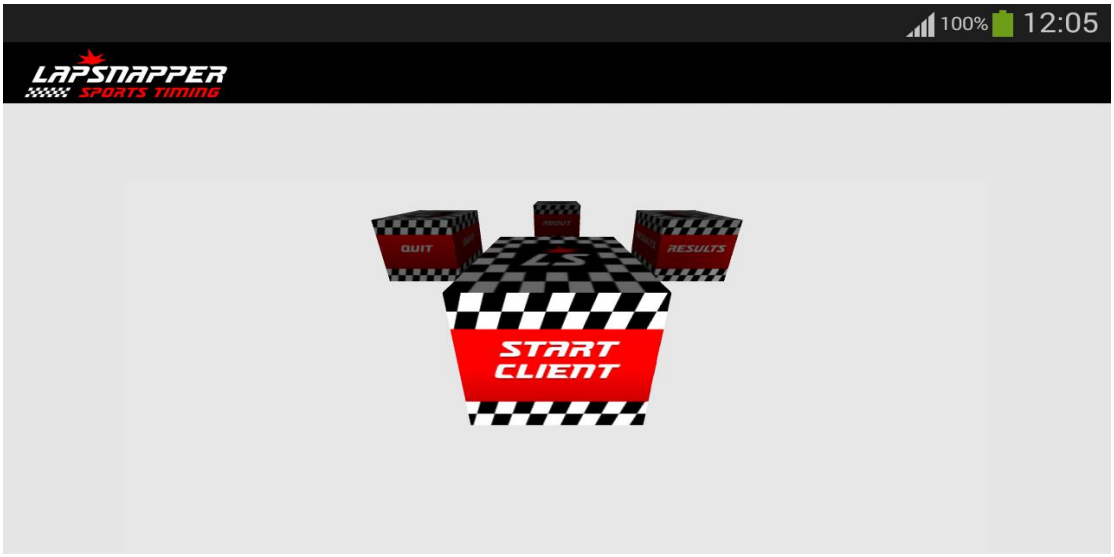

Figure 15: Main menu for the LapSnapper Personal Client Software

6. LAPSNAPPER MAGNETIC STRIPS

The LapSnapper Magnetic Strips are used to detect the start/finish and sector lines. The LapSnapper Magnetic Strip should be installed in the ground or floor or above the start/finish and sector lines. The maximum number of magnetic strips that can be installed is three, which makes it possible to have one start/finish line and two sector lines. LapSnapper Magnetic Strips are passive and do not require an external power supply. Multiple LapSnapper Pro Lap Timing Systems can use the same strip lines at the same time on the same race track. Please see Appendix A: Technical Specification of LapSnapper Magnetic Strips.

Figure 16: LapSnapper Magnetic Strip Module 0.6 m

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7. LAPSNAPPER TRANSPONDER

The Transponder is used to identify the drivers. Each Transponder has a unique ID, the Transponder ID. Each driver at the race track must have their own LapSnapper Transponder. The Transponder detects when the vehicle passes over the start/finish and sector lines and forwards this information to the LapSnapper Decoder using short-range wireless technology.

Figure 17: LapSnapper Transponder, Karting

The detection distance from the Transponder to the start/finish/sector lines is between 100 to 130 mm depending on the type of LapSnapper Magnetic Strip. Please see Sections 5.3 Installation of LapSnapper Transponder and 5.4 Installation of LapSnapper Magnetic Strips.

The LapSnapper Transponder gets its electric power from an internal CR2032 Lithium battery. The nominal operation time of the Transponder is 3 years. The nominal Transponder operation time depends on the amount of use.

The driver or owner name of the Transponder can be stored to the Transponder using the LapSnapper Lap Timing Software. The maximum length of the driver name is 16 characters. Please see Section 9.11.3 Rename transponder. The LapSnapper Lap Timing Software uses the driver name during lap timing and in the result reports.

7.1. CHANGING THE TRANSPONDER BATTERY

The LapSnapper Transponder battery can be replaced with a new one. New batteries are available from the LapSnapper online store or LapSnapper dealers.

Please note that the product warranty ends when the transponder is opened.

Step 1: Open the back cover of the Transponder.

Step 2: Remove the electronics.

Step 3: Remove the old battery using a soldering iron. Be careful with the soldering iron.

Step 4: Tape and solder the new battery to the electronics.

Step 5: Place the electronics into the Transponder.

Step 6: Seal the Transponder's back cover with silicone or glue.

Step 7: Close the Transponder's back cover.

8. LAPSNAPPER DECODER

Each smart device which is running the Practice, Qualifying or Race Sessions must have its own LapSnapper Decoder. The LapSnapper Decoder receives information about the driver passing the start' or sector line from the LapSnapper Transponders. The LapSnapper Decoder is a USB dongle, which can be connected to the smart device's USB OTG or USB 2.0 interface and it gets electric power from the smart device's USB interface.

Figure 18: LapSnapper Decoder

The LapSnapper Decoder supports two operation modes: Host and Slave. These operation modes make it possible to use multiple LapSnapper Lap Timing Systems on the same trace track at the same time. One of the LapSnapper Decoders must act in Host mode and all of the others must act in Slave mode. The LapSnapper Lap Timing Software will advise the user on the usage of these modes. See more information about settings and the LapSnapper Decoder modes in Section *9.3 Practice session**.*

The LapSnapper Decoder and Transponders communicate using short-range wireless technology. The wireless connection between the Decoder and Transponder is established and maintained automatically and no user actions are required. The maximum operation distance between the Decoder and Transponder is up to 20 m although the connection may work up to 50 m. The best operation distances are obtained when there are no physical obstacles between the Decoder and Transponders.

9. LAPSNAPPER LAP TIMING SOFTWARE

Each smart device which is hosting the lap timing must have the LapSnapper Lap Timing Software. The LapSnapper Lap Timing Software hosts the timing and communicates with the LapSnapper Personal and Pro Clients and Decoders. There are available two different types of LapSnapper Lap Timing Software, which are LapSnapper Personal Lap Timer Software and LapSnapper Pro Lap Timing Software.

The LapSnapper Pro Lap Timing Software can manage lap timing for Practice, Qualifying and Race Sessions and the LapSnapper Personal Lap Timer Software can manage lap timing for Practice session. The LapSnapper Lap Timing Software also automatically stores session results to file for later analysis and generates a result reports in PDF format. The LapSnapper Lap Timing Software can also act as a server for LapSnapper Personal and Pro Clients by sharing measured Lap, Sector and Split times for the LapSnapper Personal and Pro Clients.

The LapSnapper Lap Timing Software is also capable of programming the driver name for the LapSnapper Transponders. Please see the detailed technical specification of the LapSnapper Lap Timing Software in Section 4. Technical Specification.

9.1. STARTING THE SOFTWARE

The LapSnapper Lap Timing Software can be started from the Applications Folder by double clicking the LapSnapper Lap Timing Software icon or by plugging in the LapSnapper Decoder to the smart device.

After starting, the software requests the user to enable the Wi-Fi service if it is disabled. Accept enabling the Wi-Fi service by pressing the Yes button, if you intend to share the measured Lap, Sector and Split times from the LapSnapper Personal and Pro Clients.

Figure 19: Request to enable Wi-Fi service

9.2. EXITING SOFTWARE

The LapSnapper Lap Timing Software can be stopped by selecting Quit from the main menu.

The software requests confirmation that you wish to stop the software when Quit is selected. The software stops after Exit is confirmed by pressing Yes. The software returns to the main menu if No is selected.

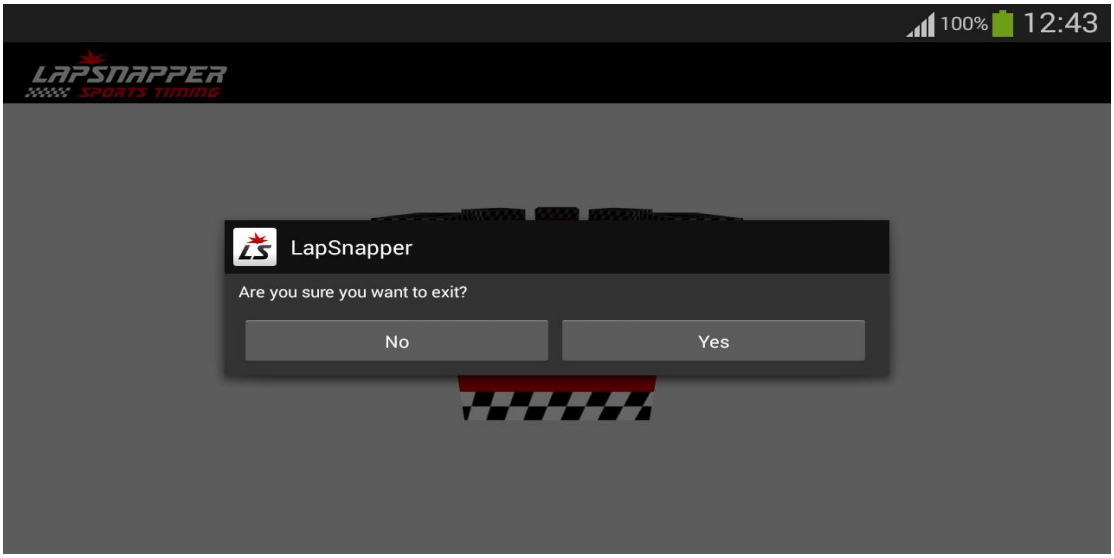

Figure 20: Request to confirm you wish to stop the software

9.3. PRACTICE SESSION

The Practice Session manages timing of practice sessions. The measured lap times of all drivers are arranged in chronological order in the main view of Practice Session.

A Practice Session is started by selecting Practice from the main menu, which activates the Session Options Dialogue. Timing the Practice Session is started by pressing Start in the Session Options Dialogue. Please see details of the Session Options Dialogue in Section 9.8 Session options dialogue.

The Practice session includes up to 7 tabs: Practice, Lap Times, Sector Timer, Split Times, All Times, Driver and Edit Times tab. The Sector, Split and All Times tabs are available only if more than one triggering line is used and the Edit Times tab is available if it is activated in the control menu. Please see details of the tabs in Section 9.9 Tabs.

9.4. QUALIFYING SESSION

The Qualifying Session manages the timing of qualifying sessions. The best lap times of all drivers are arranged in best lap time order in the main view of the Qualifying Session.

The Qualifying Session is started by selecting Qualify from the main menu, which activates the Session Options Dialogue. Timing the Qualifying Session is started by pressing the Start button in the Session Options Dialogue. Please see details of the Session Options Dialogue in Section 9.8 Session Options Dialogue.

The Qualifying Session includes up to 7 tabs: Qualifying, Lap Times, Sector Times, Split Times, All Times, Driver and Edit Times tab. The Sector, Split and All Times tabs are available only if more than one triggering line is used and the Edit Times tab is available if it is activated in the control menu. Please see details of tabs in Section 9.9 Tabs.

9.5. RACE SESSION

The Race Session manages Lap, Sector and Split timing of race sessions. The best total times of all drivers are arranged in ascending order in the main view of the Race session.

The Race Session is started by selecting Race from the main menu, which activates the Session Options Dialogue. Timing the Race Session is started by pressing the Start button in the Session Options Dialogue. Please see details of the Session Options Dialogue in Section 9.8 Session Options Dialogue.

The Race Session includes up to 6 tabs: Race, Lap Times, Sector Times, Split Times, All Times tab, Driver tab and Edit Times tab. The Sector, Split and All Times tabs are available only if more than one triggering line is used and the Edit Times tab is available if it is activated in the control menu. Please see details of tabs Section 9.9 Tabs.

9.6. OPTIONS MENU

The software has an Options menu which is available in all views of the software. The contents of the menu depend on the state of the software.

Options in the options menu:

- *Open session information dialogue*
- *Activate sending of times to LapSnapper Personal and Pro Clients*
- *Show IP address (Available only in the LapSnapper Lap Timing Software)*
- *Activate spoken lap times*
- *Set minimum lap time*
- *Activate automatic recovery*
- *Clear times (Available only in the LapSnapper Personal and Pro Client Software)*
- *Restore default settings*
- *Check availability of software updates (Available only in the main menu state)*
- *About LapSnapper*

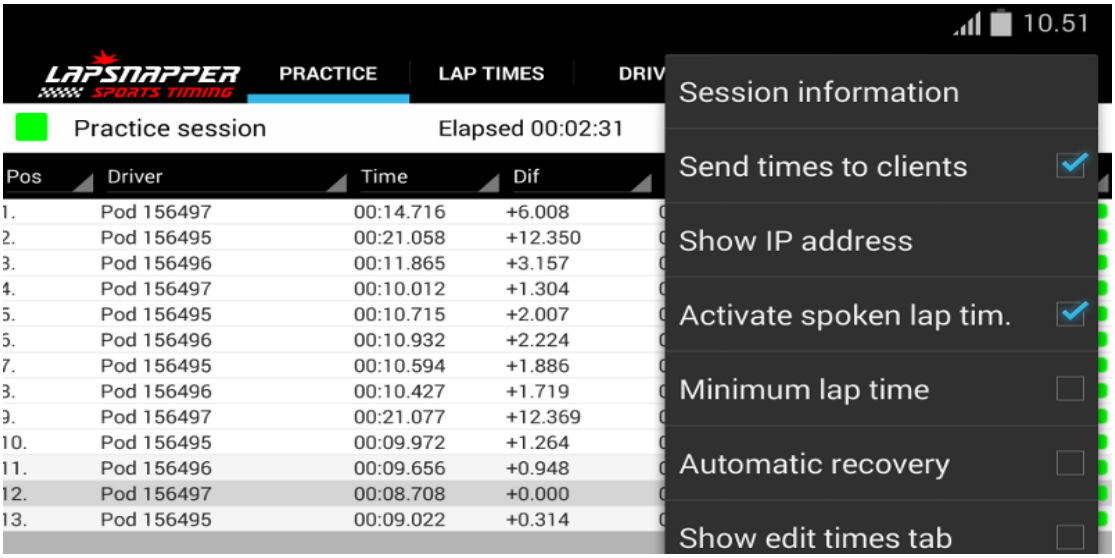

Figure 21: Example of options menu

9.7. SESSION INFORMATION DIALOGUE

Session related information can be controlled using the session information dialogue. Session information covers the name of the session and driver information such as driver name and email address. The session information dialogue supports adding and removing of drivers, naming of drivers and selecting the drivers to whom times are measured. The session information dialogue can be activated from the Options menu.

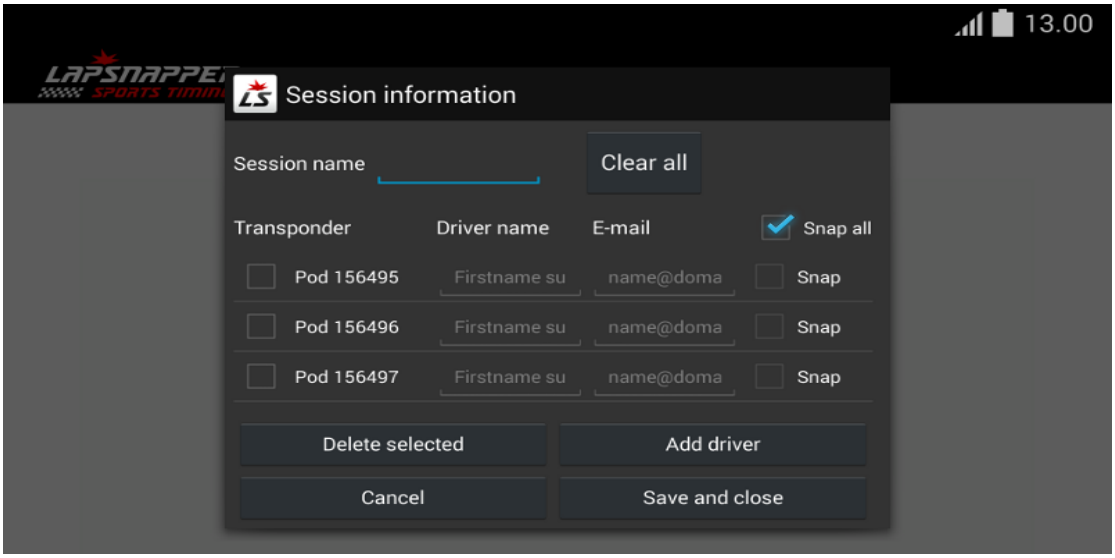

Figure 22: Session Information Dialogue

9.8. SESSION OPTIONS DIALOGUE

Session settings can be controlled using the Session Options Dialogue.

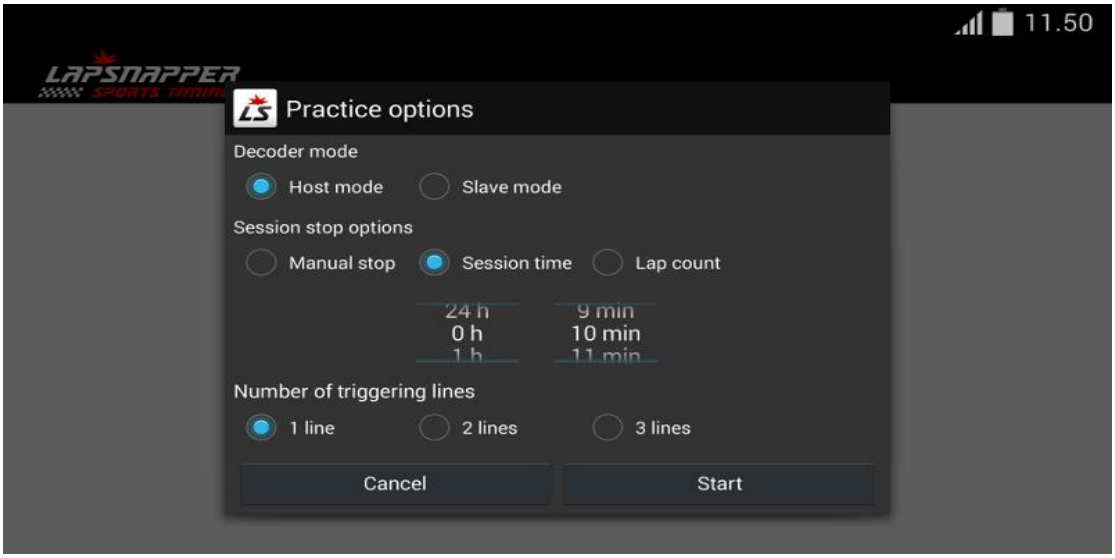

Figure 23: Session Options Dialogue

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The following session options can be controlled:

LapSnapper Decoder mode

The LapSnapper Decoder mode is selected automatically by the software. Host mode is selected if no other LapSnapper Decoders are hosting the session. Slave mode is selected if a LapSnapper Decoder is already hosting the session. It is recommended to use the automatically selected LapSnapper Decoder mode.

Session stop options

Three session stop options are available:

- *Manual stop: the session runs until the user stops the session*
- *Session time: the session runs until the selected session time is passed*
- *Lap count: the session runs until the selected lap count is reached*

Number of triggering lines

The selection has to be the same as the number of LapSnapper start/finish and sector lines installed on the race track.

Start line

The selection defines the placement of the start/finish line on the race track.

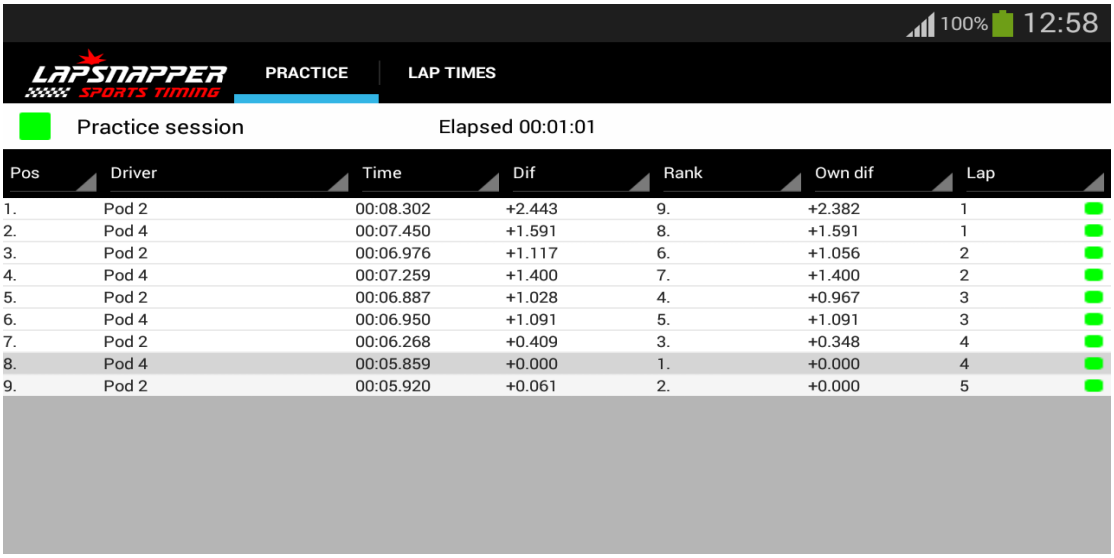
9.9. TABS

The Session consists of up to 7 tabs: Practice, Lap Times, Sector Times, Split Times, All Times, Driver and Edit Times tab. The Sector, Split and All Times tabs are available only if more than one triggering line is used and the Edit Times tab is available if it is activated in the control menu.

Structure of the tabs:

- *Each tab has an Action Bar, containing the LapSnapper logo and tab selections*
- *Below the Action Bar is the Timing Status Bar, with status information for the session, such as session name, session time or lap count and tab option spinners.*
- *Below the Timing Status Bar is the Timing Header, containing the timing headers and timing option spinners*
- *Below the Timing Header is Time View, containing actual time information*

The tab can be changed by pressing the tab name in the Action Bar or by swiping the screen.



Pos	Driver	Time	Dif	Rank	Own dif	Lap
1.	Pod 2	00:08.302	+2.443	9.	+2.382	1
2.	Pod 4	00:07.450	+1.591	8.	+1.591	1
3.	Pod 2	00:06.976	+1.117	6.	+1.056	2
4.	Pod 4	00:07.259	+1.400	7.	+1.400	2
5.	Pod 2	00:06.887	+1.028	4.	+0.967	3
6.	Pod 4	00:06.950	+1.091	5.	+1.091	3
7.	Pod 2	00:06.268	+0.409	3.	+0.348	4
8.	Pod 4	00:05.859	+0.000	1.	+0.000	4
9.	Pod 2	00:05.920	+0.061	2.	+0.000	5

Figure 24: Example of the Practice Tab

The tabs have a zoom option which can be activated by touching the screen with two fingers and moving the fingers on the screen: this is called scaling the screen. The software changes to panning mode once the screen has been scaled. In this mode, the view can be moved to new place by touching or swiping the screen. You can switch between the panning and normal modes by touching the screen for a long time.

The Timing Status Bars have the following filtering spinners

- *Main tab: no option spinners*
- *Lap Times tab: time and driver filtering spinners*
- *Sector Times tab: time, driver and sector filtering spinners*
- *Split Times tab: time, driver and split filtering spinners*
- *Sector Times tab: time and driver filtering spinners*

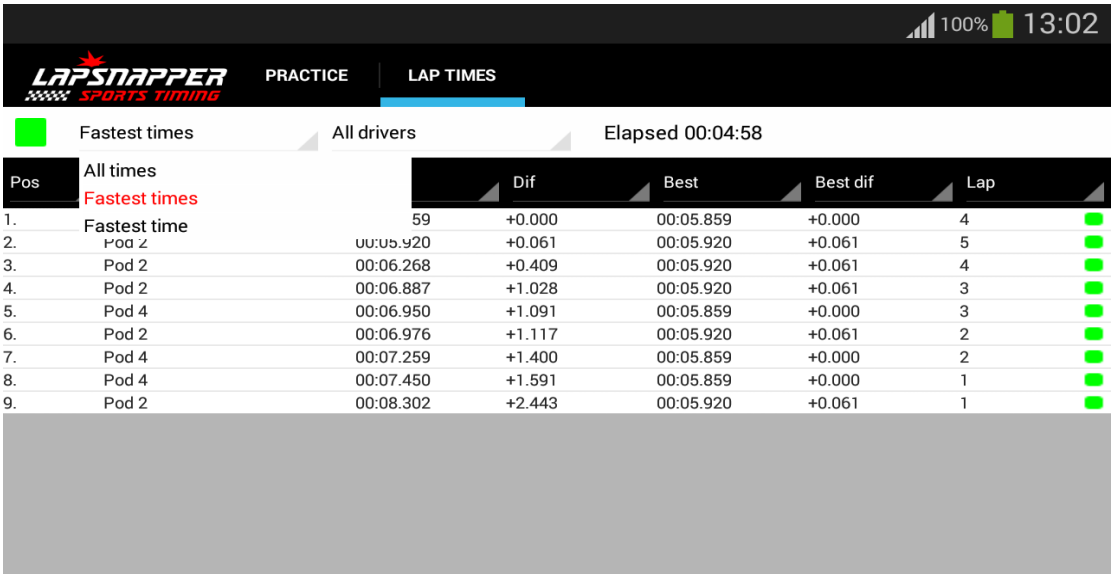


Figure 25: Example of the time filtering spinner

The timing header has seven time filtering spinners, which can be used to select the time information to show. The list below explains the meaning of the time filtering spinners:

Spinner 1:

Pos	*Position*
Lap	*Lap number*

Spinner 2:

Driver	*Driver name*
Transponder	*Transponder ID*

Spinner 3:

Time	*Latest time*
Best	*Best time*
Total	*Total time*

Spinner 4:

Dif	*Difference of time form all best times*

Best dif	*Difference of best time from all best times*
Own dif	*Difference of time from own best time*
Total dif	*Difference of total time from all best total times*

Spinner 5:

Time	*Latest time*
Best	*Best time*
Total	*Total time*
Rank	*Rank of time*

Spinner 6:

Dif	*Difference of time from all best times*
Own dif	*Difference of time from own best time*
Total dif	*Difference of total time from all best total times*
Best	*Best time*

Spinner 7:

Lap	*Lap number*
Best lap	*Number of best lap*
Rank	*Rank of time*

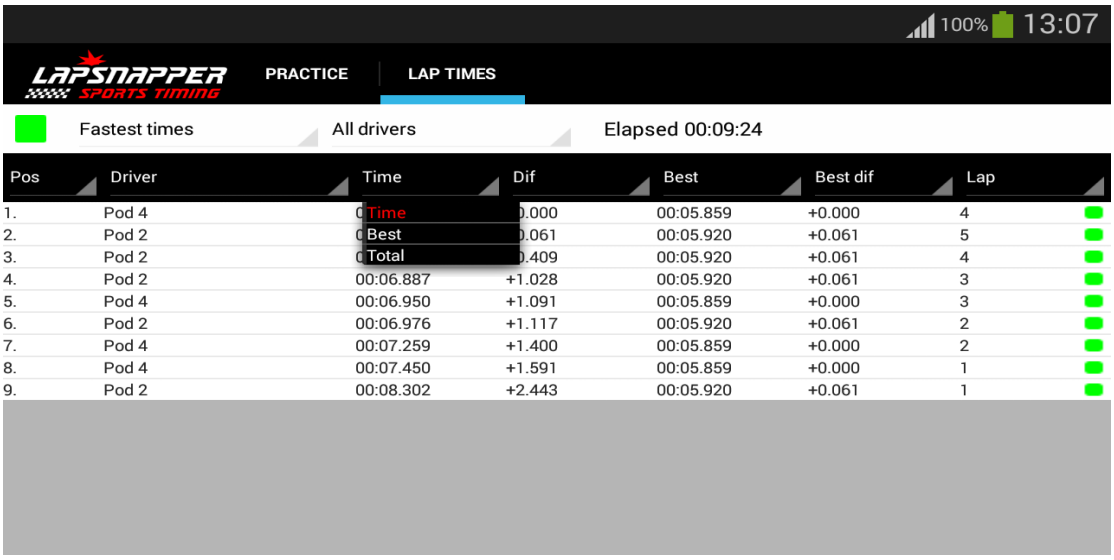


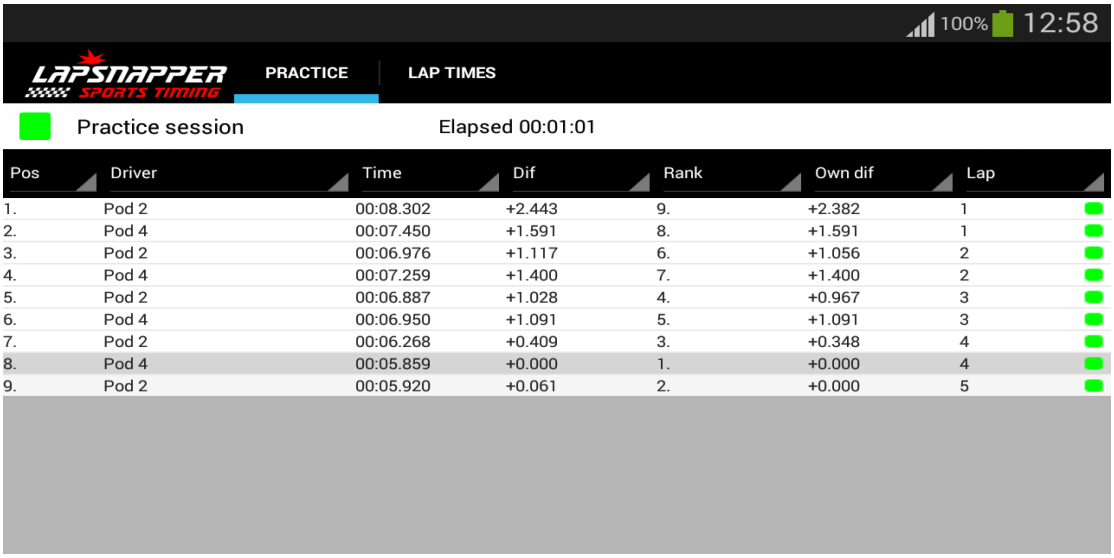
Figure 26: Example of time filtering spinner 3

9.9.1. Main Tab

The Main Tab is the main view of the session and its content depends on the session type and session options.

The Main Tab maintains the following information:

- *Name of the session*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Results of session*
  - *Results of practice session if practice session is selected*
  - *Results of qualifying session if qualifying session is selected*
  - *Results of race session if race session is selected*
  - *Results of LapSnapper session, if you are using the LapSnapper Pro Client*



Pos	Driver	Time	Dif	Rank	Own dif	Lap
1.	Pod 2	00:08.302	+2.443	9.	+2.382	1
2.	Pod 4	00:07.450	+1.591	8.	+1.591	1
3.	Pod 2	00:06.976	+1.117	6.	+1.056	2
4.	Pod 4	00:07.259	+1.400	7.	+1.400	2
5.	Pod 2	00:06.887	+1.028	4.	+0.967	3
6.	Pod 4	00:06.950	+1.091	5.	+1.091	3
7.	Pod 2	00:06.268	+0.409	3.	+0.348	4
8.	Pod 4	00:05.859	+0.000	1.	+0.000	4
9.	Pod 2	00:05.920	+0.061	2.	+0.000	5

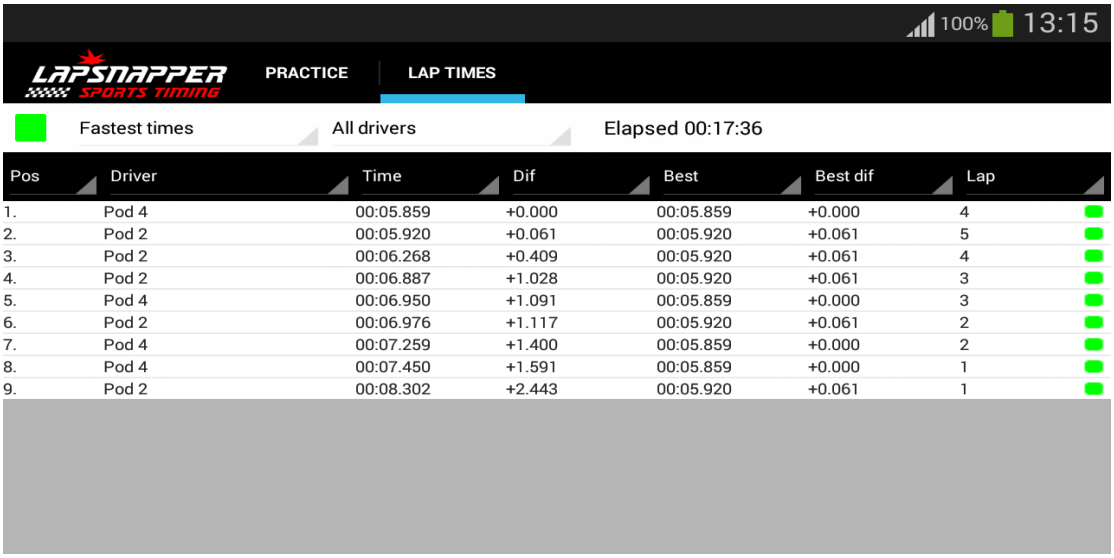
Figure 27: Example of Practice Tab

9.9.2. Lap Time Tab

The Lap Time Tab shows the measured lap times and its content depends on the time and driver filtering spinners.

The Lap Time Tab maintains the following information:

- *Time filtering spinner*
- *Driver filtering spinner*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Lap times*



Pos	Driver	Time	Dif	Best	Best dif	Lap
1.	Pod 4	00:05.859	+0.000	00:05.859	+0.000	4
2.	Pod 2	00:05.920	+0.061	00:05.920	+0.061	5
3.	Pod 2	00:06.268	+0.409	00:05.920	+0.061	4
4.	Pod 2	00:06.887	+1.028	00:05.920	+0.061	3
5.	Pod 4	00:06.950	+1.091	00:05.859	+0.000	3
6.	Pod 2	00:06.976	+1.117	00:05.920	+0.061	2
7.	Pod 4	00:07.259	+1.400	00:05.859	+0.000	2
8.	Pod 4	00:07.450	+1.591	00:05.859	+0.000	1
9.	Pod 2	00:08.302	+2.443	00:05.920	+0.061	1

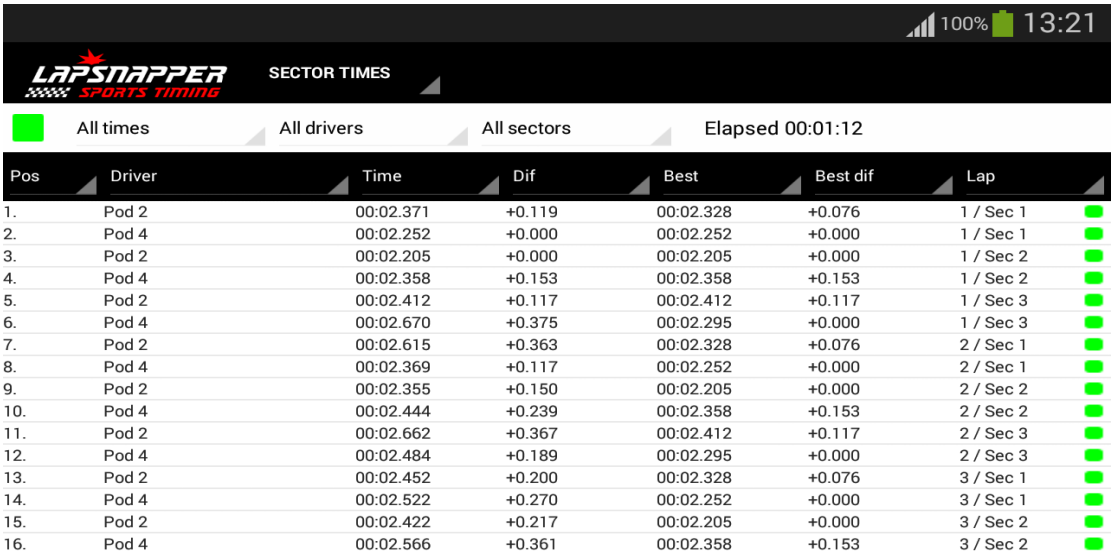
Figure 28: Example of Lap Time Tab

9.9.3. Sector Time Tab

The Sector Time Tab shows the measured sector times and its content depends on the time, driver and sector filtering spinners.

The Sector Time Tab maintains the following information:

- *Time filtering spinner*
- *Driver filtering spinner*
- *Sector filtering spinner*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Sector times*



Pos	Driver	Time	Dif	Best	Best dif	Lap
1.	Pod 2	00:02.371	+0.119	00:02.328	+0.076	1 / Sec 1
2.	Pod 4	00:02.252	+0.000	00:02.252	+0.000	1 / Sec 1
3.	Pod 2	00:02.205	+0.000	00:02.205	+0.000	1 / Sec 2
4.	Pod 4	00:02.358	+0.153	00:02.358	+0.153	1 / Sec 2
5.	Pod 2	00:02.412	+0.117	00:02.412	+0.117	1 / Sec 3
6.	Pod 4	00:02.670	+0.375	00:02.295	+0.000	1 / Sec 3
7.	Pod 2	00:02.615	+0.363	00:02.328	+0.076	2 / Sec 1
8.	Pod 4	00:02.369	+0.117	00:02.252	+0.000	2 / Sec 1
9.	Pod 2	00:02.355	+0.150	00:02.205	+0.000	2 / Sec 2
10.	Pod 4	00:02.444	+0.239	00:02.358	+0.153	2 / Sec 2
11.	Pod 2	00:02.662	+0.367	00:02.412	+0.117	2 / Sec 3
12.	Pod 4	00:02.484	+0.189	00:02.295	+0.000	2 / Sec 3
13.	Pod 2	00:02.452	+0.200	00:02.328	+0.076	3 / Sec 1
14.	Pod 4	00:02.522	+0.270	00:02.252	+0.000	3 / Sec 1
15.	Pod 2	00:02.422	+0.217	00:02.205	+0.000	3 / Sec 2
16.	Pod 4	00:02.566	+0.361	00:02.358	+0.153	3 / Sec 2

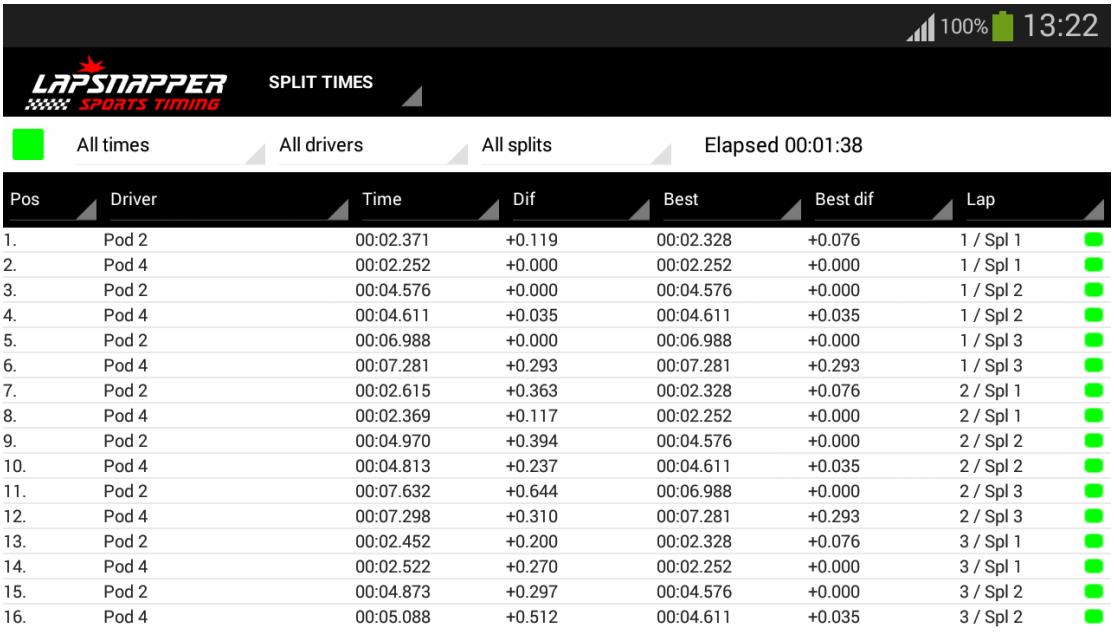
Figure 29: Example of Sector Time Tab

9.9.4. Split Time Tab

The Split Time Tab shows the measured split times and its content depends on the time, driver and split filtering spinners. The Split time tab is visible only if there are three triggering lines.

The Split Time Tab maintains the following information:

- *Time filtering spinner*
- *Driver filtering spinner*
- *Split filtering spinner*
- *Session information*
    - *Session time, if manual or session time based stop is selected*
    - *Lap count, if lap count based stop is selected*
- *Split times*



Pos	Driver	Time	Dif	Best	Best dif	Lap
1.	Pod 2	00:02.371	+0.119	00:02.328	+0.076	1 / Spl 1
2.	Pod 4	00:02.252	+0.000	00:02.252	+0.000	1 / Spl 1
3.	Pod 2	00:04.576	+0.000	00:04.576	+0.000	1 / Spl 2
4.	Pod 4	00:04.611	+0.035	00:04.611	+0.035	1 / Spl 2
5.	Pod 2	00:06.988	+0.000	00:06.988	+0.000	1 / Spl 3
6.	Pod 4	00:07.281	+0.293	00:07.281	+0.293	1 / Spl 3
7.	Pod 2	00:02.615	+0.363	00:02.328	+0.076	2 / Spl 1
8.	Pod 4	00:02.369	+0.117	00:02.252	+0.000	2 / Spl 1
9.	Pod 2	00:04.970	+0.394	00:04.576	+0.000	2 / Spl 2
10.	Pod 4	00:04.813	+0.237	00:04.611	+0.035	2 / Spl 2
11.	Pod 2	00:07.632	+0.644	00:06.988	+0.000	2 / Spl 3
12.	Pod 4	00:07.298	+0.310	00:07.281	+0.293	2 / Spl 3
13.	Pod 2	00:02.452	+0.200	00:02.328	+0.076	3 / Spl 1
14.	Pod 4	00:02.522	+0.270	00:02.252	+0.000	3 / Spl 1
15.	Pod 2	00:04.873	+0.297	00:04.576	+0.000	3 / Spl 2
16.	Pod 4	00:05.088	+0.512	00:04.611	+0.035	3 / Spl 2

Figure 30: Example of Split Time Tab

9.9.5. All Times Tab

The All Times Tab shows the measured lap, sector and split times and its content depends on the time and driver filtering spinners.

The All Times Tab maintains the following information:

- *Time filtering spinner*
- *Driver filtering spinner*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Lap, sector and split times*

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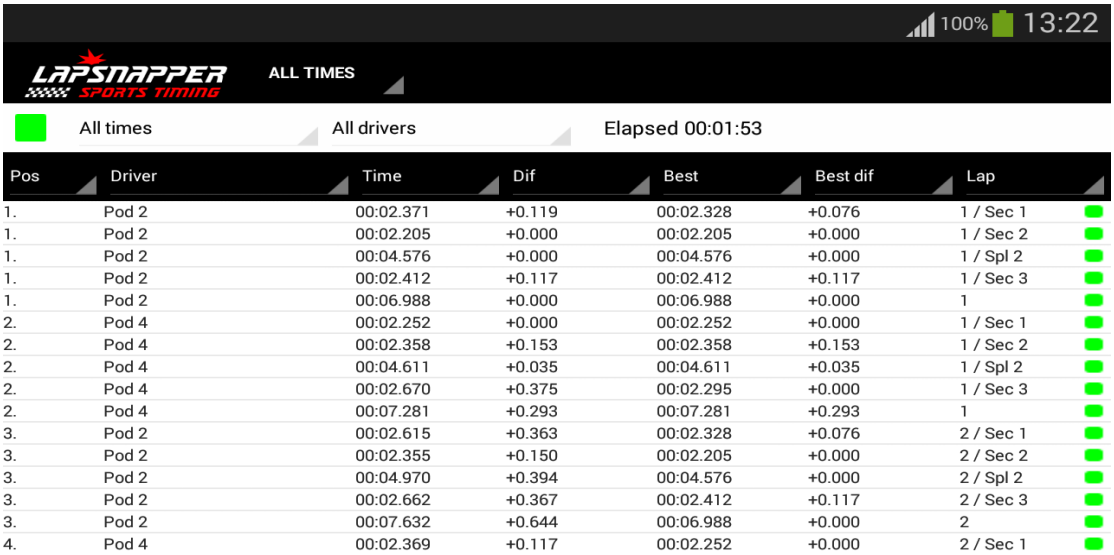

Pos	Driver	Time	Dif	Best	Best dif	Lap
1.	Pod 2	00:02.371	+0.119	00:02.328	+0.076	1 / Sec 1
1.	Pod 2	00:02.205	+0.000	00:02.205	+0.000	1 / Sec 2
1.	Pod 2	00:04.576	+0.000	00:04.576	+0.000	1 / Spl 2
1.	Pod 2	00:02.412	+0.117	00:02.412	+0.117	1 / Sec 3
1.	Pod 2	00:06.988	+0.000	00:06.988	+0.000	1
2.	Pod 4	00:02.252	+0.000	00:02.252	+0.000	1 / Sec 1
2.	Pod 4	00:02.358	+0.153	00:02.358	+0.153	1 / Sec 2
2.	Pod 4	00:04.611	+0.035	00:04.611	+0.035	1 / Spl 2
2.	Pod 4	00:02.670	+0.375	00:02.295	+0.000	1 / Sec 3
2.	Pod 4	00:07.281	+0.293	00:07.281	+0.293	1
3.	Pod 2	00:02.615	+0.363	00:02.328	+0.076	2 / Sec 1
3.	Pod 2	00:02.355	+0.150	00:02.205	+0.000	2 / Sec 2
3.	Pod 2	00:04.970	+0.394	00:04.576	+0.000	2 / Spl 2
3.	Pod 2	00:02.662	+0.367	00:02.412	+0.117	2 / Sec 3
3.	Pod 2	00:07.632	+0.644	00:06.988	+0.000	2
4.	Pod 4	00:02.369	+0.117	00:02.252	+0.000	2 / Sec 1

Figure 31: Example of All Times Tab

9.9.6. Driver Tab

The Driver Tab shows the time information of selected driver.

The Driver Tab maintains the following information:

- *Driver filtering spinner*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Time information of selected driver*

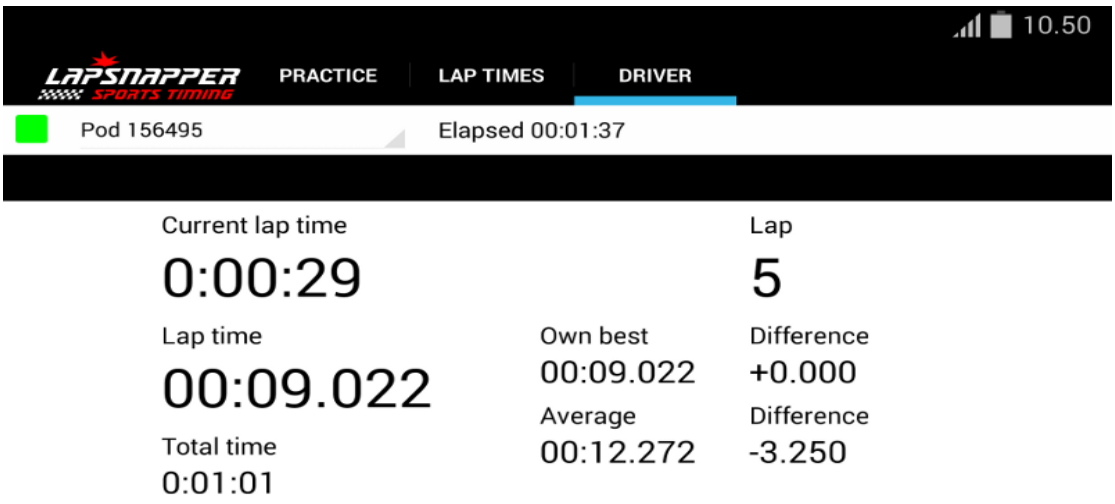

Figure 32: Example of Driver Tab

9.9.7. Edit Times Tab

The Edit Times Tab makes it possible to edit time information. Following operations are supported:

- *Remove time*
- *Restore removed time*
- *Split time by 2 or 3*

The Edit Tab maintains the following information:

- *Time filtering spinner*
- *Driver filtering spinner*
- *Session information*
  - *Session time, if manual or session time based stop is selected*
  - *Lap count, if lap count based stop is selected*
- *Edit time view*

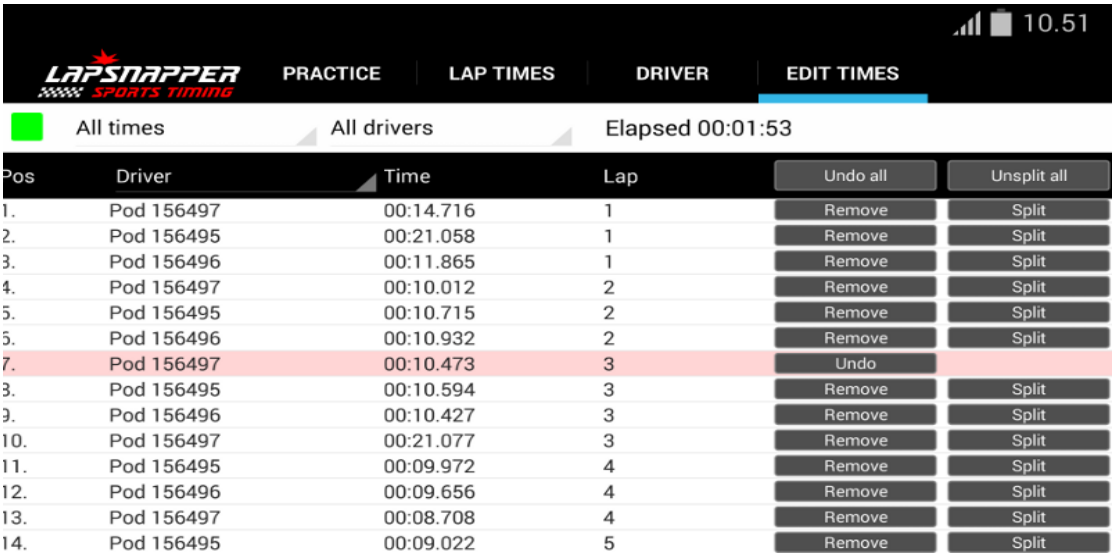
10.51
LAPSNAPPER SPORTS TIMING
PRACTICE
LAP TIMES
DRIVER
EDIT TIMES
All times
All drivers
Elapsed 00:01:53
Pos
Driver
Time
Lap
Undo all
Unsplit all
1. Pod 156497 00:14.716 1 Remove Split
2. Pod 156495 00:21.058 1 Remove Split
3. Pod 156496 00:11.865 1 Remove Split
4. Pod 156497 00:10.012 2 Remove Split
5. Pod 156495 00:10.715 2 Remove Split
6. Pod 156496 00:10.932 2 Remove Split
7. Pod 156497 00:10.473 3 Undo
8. Pod 156495 00:10.594 3 Remove Split
9. Pod 156496 00:10.427 3 Remove Split
10. Pod 156497 00:21.077 3 Remove Split
11. Pod 156495 00:09.972 4 Remove Split
12. Pod 156496 00:09.656 4 Remove Split
13. Pod 156497 00:08.708 4 Remove Split
14. Pod 156495 00:09.022 5 Remove Split

Figure 33: Example of Edit Times Tab

9.10. SESSION RESULTS

The session results are stored automatically to file when the session is closed or the times on the LapSnapper Personal or Pro Client are cleared. Stored session results can be loaded to software afterwards from the file. The session result report is generated at the same time in PDF format.

9.10.1. Session results

Session results can be loaded by selecting Results from the main menu, which opens the Results Dialogue. Session results can be opened by selecting the Session Result file and pressing Open.

Session results can be deleted by selecting the Session Results file and pressing the Delete button, which opens a confirmation dialogue. The Session results file is deleted if Yes is selected in the confirmation dialogue.

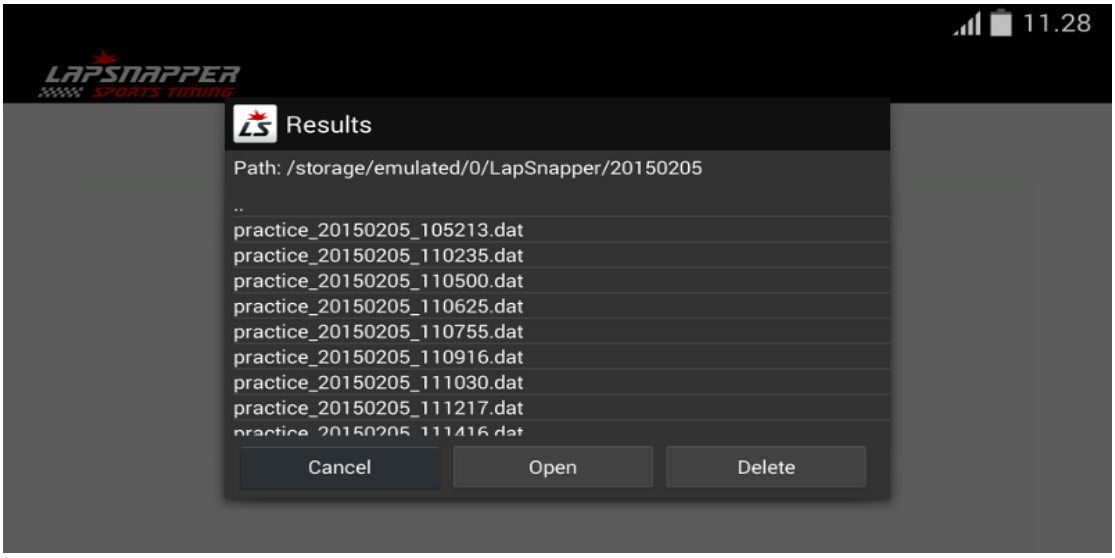

Figure 34: Example of Open Session Results Dialogue

9.10.2. Session Result Report

The Session Result Report is a PDF which can be opened using a PDF reader. The Session Result Report can also be copied to other devices as a normal file using the file manager. The Session Results Report can also be sent automatically by email to defined recipients when the session is stopped.

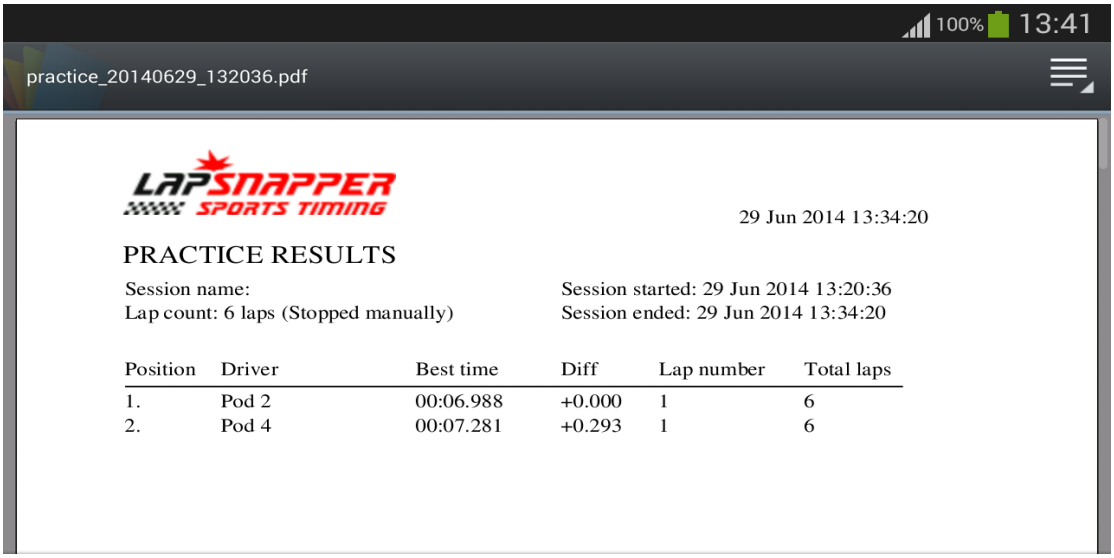
100%
13:41
practice_20140629_132036.pdf
29 Jun 2014 13:34:20
PRACTICE RESULTS
Session name:
Lap count: 6 laps (Stopped manually)
Session started: 29 Jun 2014 13:20:36
Session ended: 29 Jun 2014 13:34:20
Position Driver Best time Diff Lap number Total laps
1. Pod 2 00:06.988 +0.000 1 6
2. Pod 4 00:07.281 +0.293 1 6

Figure 35: Example of PDF Session Result Report

9.11. SETTINGS

The System Settings can be managed by selecting Settings from the main menu, which opens the Settings Dialogue.

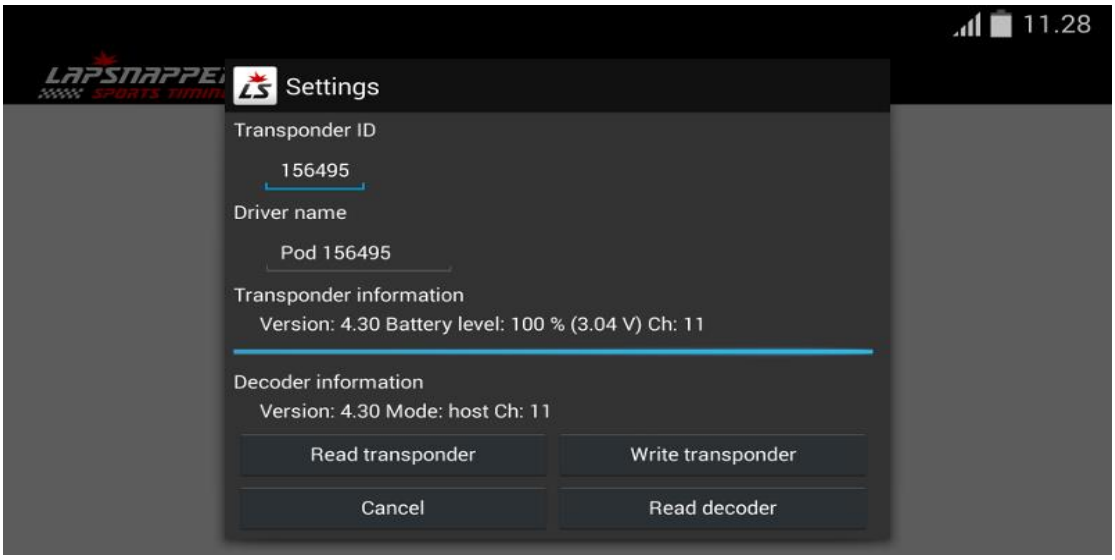

Figure 36: Example of Settings Dialogue

9.11.1. Read decoder information

Decoder information can be read by selecting Read decoder from the Settings Dialogue.

Available decoder information:

- *Decoder software version number*
- *Decoder mode*
- *Decoder channel*

9.11.2. Read transponder information

Before starting, make sure that the transponder and magnet are available. Transponder information can be read by selecting Read transponder from the Settings Dialogue, which opens the Read transponder information dialogue. Next, place a magnet close to the transponder and wait until the transponder information is received. This takes about 5-6 seconds.

Available transponder information

- *Transponder ID*
- *Driver name*
- *Transponder software version number, battery charge level percentage and battery voltage*
- *Transponder channel*

9.11.3. Rename Transponder

Before starting, make sure that the transponder and magnet are available. Next, read the transponder information. Please see Section 9.11.2 Read transponder information. Next, input the new driver name into the Settings dialogue and start reprogramming by pressing the Write transponder button in the Settings dialogue, which opens the Read transponder information dialogue. Next, place a magnet close to the transponder and wait until the transponder is programmed. This takes about 5-6 seconds.

9.12. ABOUT LAPSNAPPER PRO

The About Dialogue of LapSnapper can be opened by selecting About LapSnapper from the Option Menu or About from the main menu and can be closed by pressing the OK button in the About Dialogue.

Figure 37: Example of LapSnapper Pro About Dialogue

9.13. MULTIPLE LAP TIMING SYSTEMS ON THE SAME RACE TRACK

LapSnapper supports use of multiple LapSnapper Lap Timing Systems at the same time on the same race track. All LapSnapper Lap Timing Systems uses same start/finish and sector lines and Transponders. In such situation, one LapSnapper Decoder operates in Host mode and all of the others must operate in Slave mode. See Section 8 Decoder.

The LapSnapper Decoder which is operating in Host mode must be available throughout the session until it ends.

Warning: Please note that receiving of all the measured times is guaranteed only to the Decoder operating in the host mode, when more than one LapSnapper Lap Timing System is used to race track at the same time. Decoders operating in the slave mode will not necessarily receive all measured times, especially when the radio signal is weak.

9.14. SENDING MEASURED TIMES TO THE LAPSNAPPER PERSONAL AND PRO CLIENTS

LapSnapper Lap Timing System is capable of sending the measured lap, sector and split times to the LapSnapper Personal and Pro Clients via a Wi-Fi service. Sending of times can be activated in the Options menu. Please see Section 9.6 Options menu. The measured times are automatically sent to the LapSnapper Personal and Pro Clients when the feature is activated.

The feature requires that the LapSnapper Lap Timing System and LapSnapper Personal and Pro Clients are connected to the same Wi-Fi network.

The LapSnapper IP address is shown by selecting Show IP Address from the Options menu.

9.15. LAPSNAPPER SERVER MODE

In LapSnapper server mode the measured lap, sector and split times are sent directly to the LapSnapper Personal and Pro Clients using Wi-Fi service without any further user operation. This makes it possible to leave the LapSnapper Lap Timing System continuously on without any user actions. The LapSnapper Server mode is activated from the main menu.

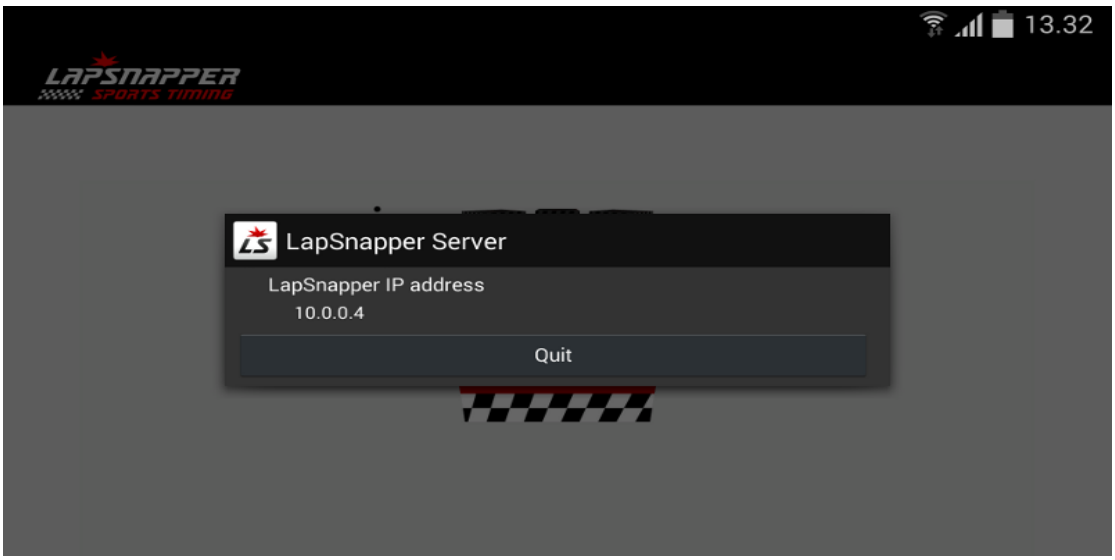

Figure 38: LapSnapper server mode

LapSnapper Server mode can be used to make Lap, Sector and Split times easily available to all persons visiting the race track.

10. LAPSNAPPER PERSONAL CLIENT SOFTWARE

Each LapSnapper Personal Client must have the LapSnapper Personal Client Software installed. The LapSnapper Personal Client Software communicates with LapSnapper Lap Timing System and receives the measured Lap, Sector and Split times via a Wi-Fi service.

The LapSnapper Personal Client Software is able to manage the Practice session. Please see Section 9.3 Practice session. It also automatically stores the Practice session results to file for later analysis, and generates a result report file in PDF format.

10.1. STARTING THE SOFTWARE

The LapSnapper Personal Client Software can be started from the Applications folder by double clicking the LapSnapper Personal Client icon.

After starting, the software requests the user to enable the Wi-Fi service if it is disabled. Accept enabling the Wi-Fi service by pressing the Yes button, if you intend to receive the measured Lap, Sector and Split times from the LapSnapper Lap Timing System.

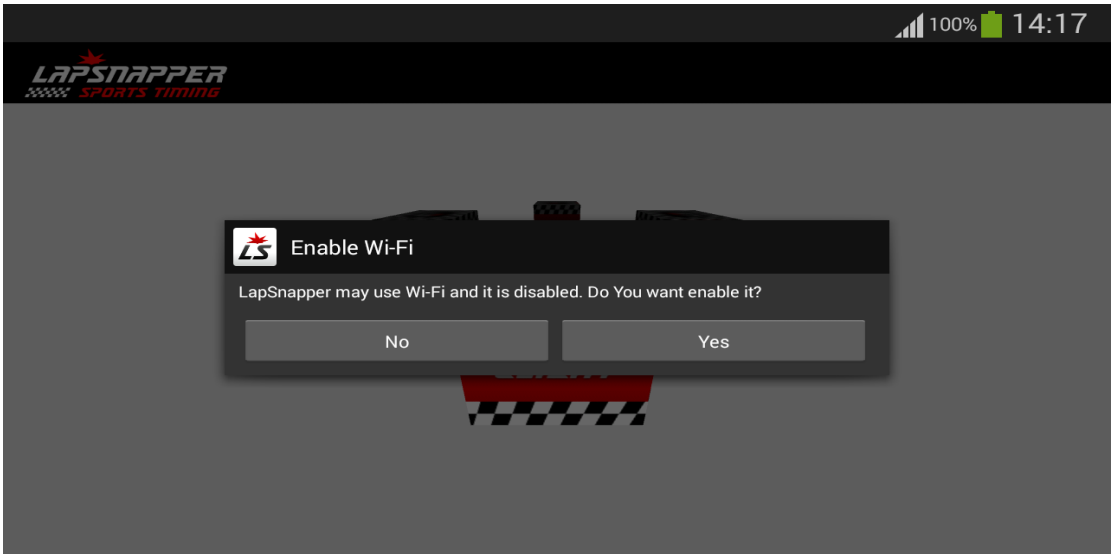

Figure 39: Request to enable Wi-Fi service

10.2. STARTING THE SESSION

The session can be started by selecting Start client from the main menu. After that give LapSnapper IP address to client options dialogue and press start.

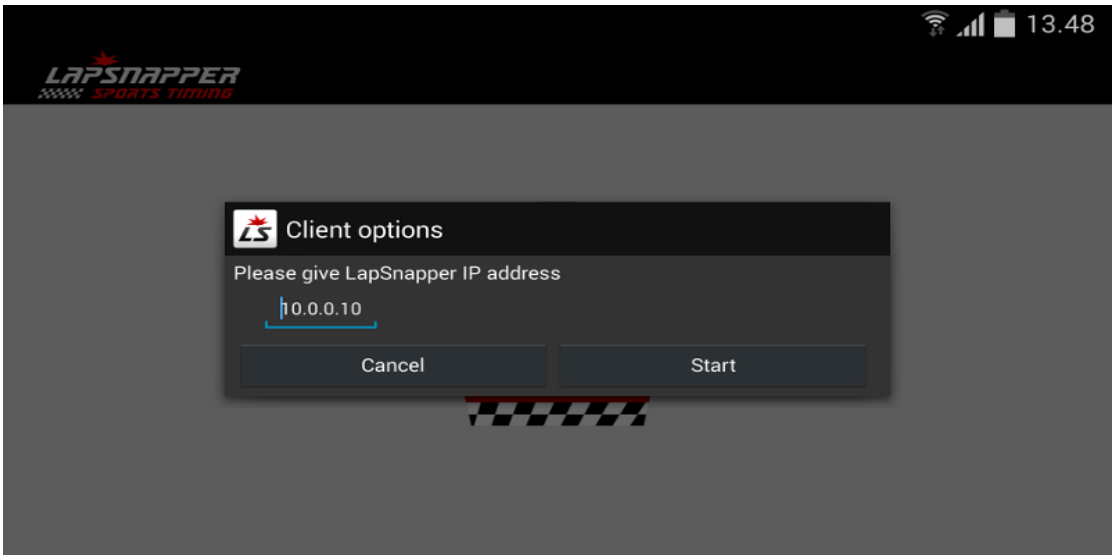

Figure 40: Client options dialogue

10.3. EXIT FROM SOFTWARE

The LapSnapper Personal Client Software can be stopped by selecting Quit from the main menu.

The software requests confirmation that you wish to stop the software when Quit is pressed in the main menu. The software stops after Exit is confirmed by pressing the Yes button. The software returns to the main menu if the No button is selected.

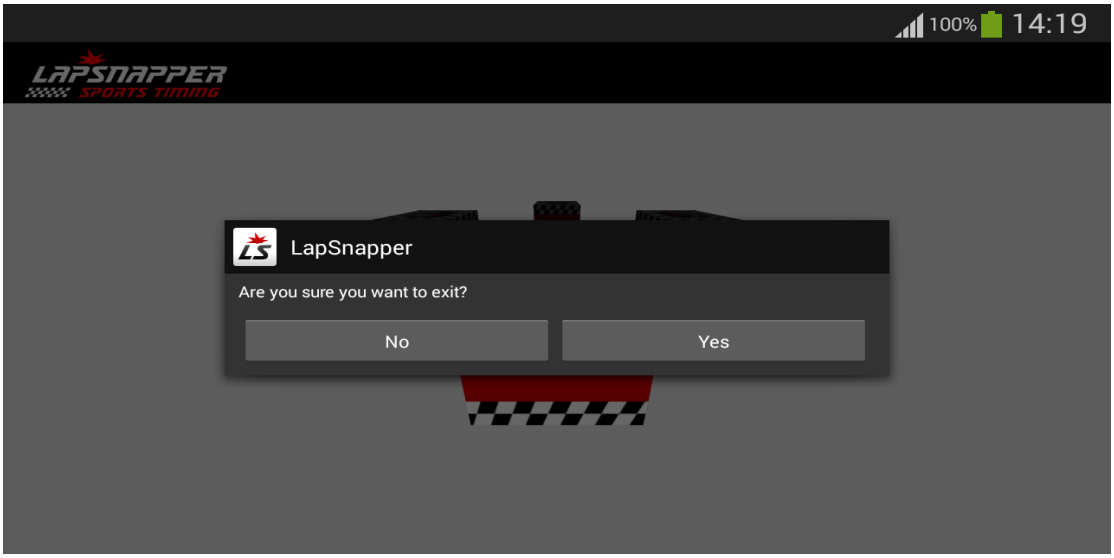

Figure 41: Request to confirm you wish to stop the software

10.4. SESSION RESULTS

Please see Section 9.10 Session results.

10.1. ABOUT LAPSNAPPER PERSONAL CLIENT

The About Dialogue for the LapSnapper Personal Client can be opened by selecting About LapSnapper from Option menu or About from the main menu and can be closed by pressing the OK button in the About Dialogue.

Figure 42: LapSnapper Personal Client About Dialogue

11. LAPSNAPPER PRO CLIENT SOFTWARE

Each LapSnapper Pro Client must have the LapSnapper Pro Client Software installed. The LapSnapper Pro Client Software communicates with LapSnapper Lap Timing System and receives the measured Lap, Sector and Split times via a Wi-Fi service.

The LapSnapper Pro Client Software is able to manage the Practice, Qualifying and Race sessions. Please see Section 9.3 Practice session, 9.4 Qualifying session and 9.5 Race session. It also automatically stores the session results to file for later analysis, and generates a result report file in PDF format.

11.1. STARTING THE SOFTWARE

The LapSnapper Pro Client Software can be started from the Applications folder by double clicking the LapSnapper Pro Client icon.

After starting, the software requests the user to enable the Wi-Fi service if it is disabled. Accept enabling the Wi-Fi service by pressing the Yes button, if you intend to receive the measured Lap, Sector and Split times from the LapSnapper Lap Timing System.

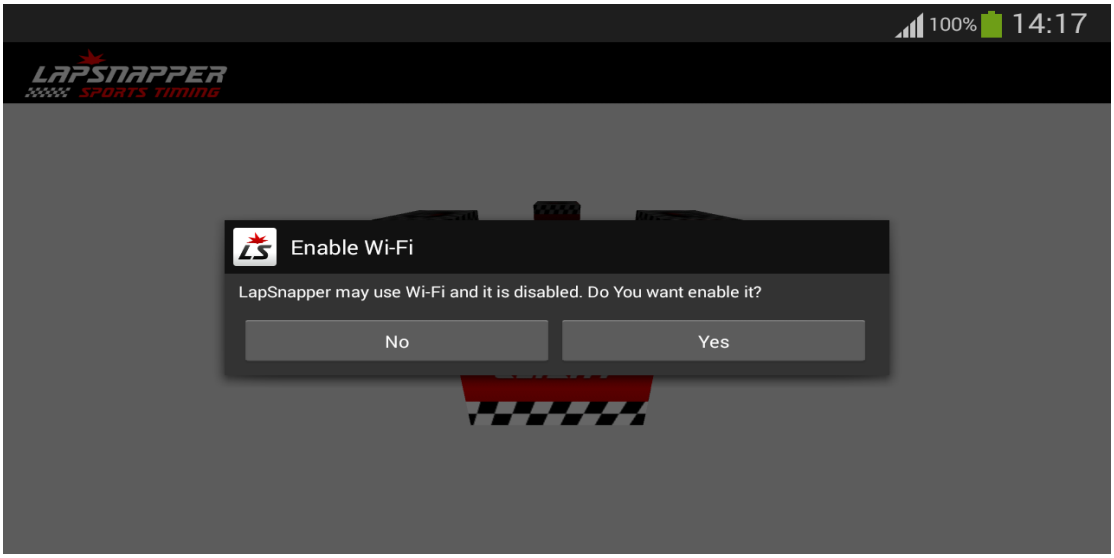

Figure 43: Request to enable Wi-Fi service

11.2. STARTING THE SESSION

The session can be started by selecting Practice, Qualify or Race from the main menu. After that give LapSnapper IP address and other session options to the session options dialogue and press start.

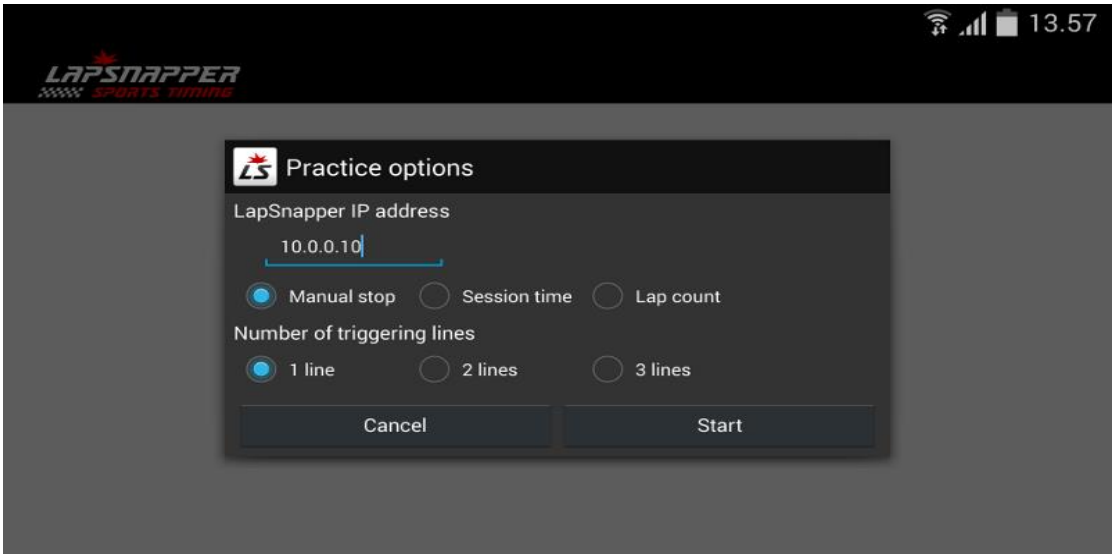

Figure 44: Practice session options dialogue

11.3. EXIT FROM SOFTWARE

The LapSnapper Pro Client Software can be stopped by selecting Quit from the main menu.

The software requests confirmation that you wish to stop the software when Quit is pressed in the main menu. The software stops after Exit is confirmed by pressing the Yes button. The software returns to the main menu if the No button is selected.

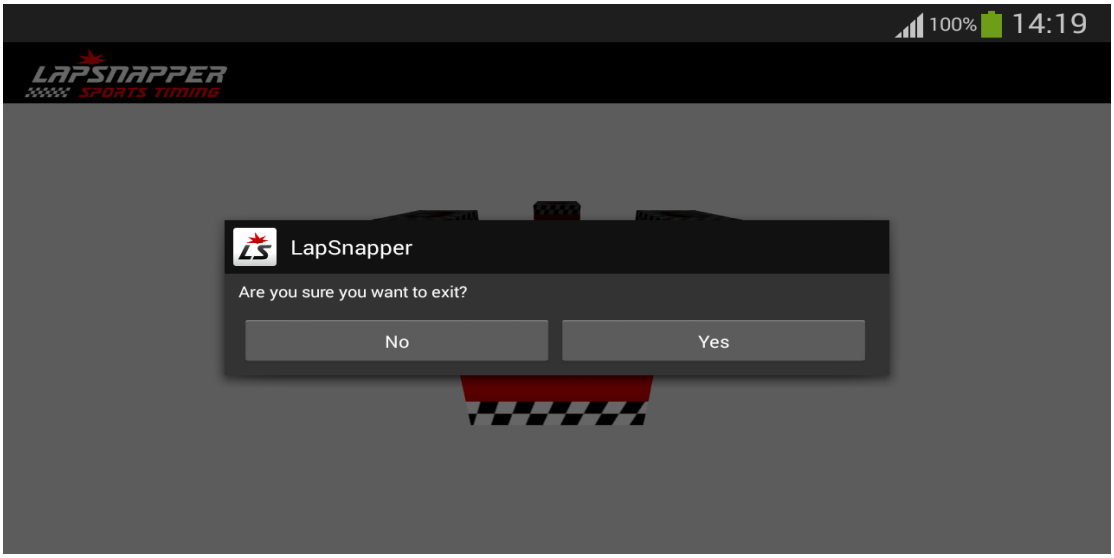

Figure 45: Request to confirm you wish to stop the software

11.4. SESSION RESULTS

Please see Section 9.10 Session results.

11.5. ABOUT LAPSNAPPER PRO CLIENT

The About Dialogue for the LapSnapper Pro Client can be opened by selecting About LapSnapper from Option menu or About from the main menu and can be closed by pressing the OK button in the About Dialogue.

Figure 46: LapSnapper Pro Client About Dialogue

12. TROUBLESHOOTING

i) *The LapSnapper Lap Timing System does not measure times*

Tips to solve the problem

- *Check that the LapSnapper Decoder is connected to the smart device*
- *Check that the distance from the LapSnapper Transponders to the Decoder is not too long*
- *Check that LapSnapper Decoder is not near other 2.4 GHz radio equipment (Closer than 2–5 m)*
- *Check that the Micro USB OTG to USB 2.0 Adapter is not broken*
- *Check that the installation height of the LapSnapper Transponder is not higher than the maximum detection height of the magnetic strip*
- *Check that above and below the Transponder is not a metal due signal do not pass through metal. Signal passes through plastics, aluminium and carbon fiber.*
- *Check that the magnetic strips are assembled properly. Notice that the magnets have to reject each other, otherwise the system will not work properly*

ii) *The LapSnapper Lap Timing System does not measure all times*

Tips to solve the problem

- *Check that Decoder operates in the host mode*

  Please note that receiving of all the measured times is guaranteed only to the Decoder operating in the host mode, when more than one LapSnapper Pro Lap Timing System is used to race track at the same time. Decoders operating in the slave mode will not necessarily receive all measured times, especially when the radio signal is weak.

iii) *LapSnapper Personal or Pro Client does not connect to the server or does not receive times*

Tips to solve the problem

- *Check that the LapSnapper has the IP address*
- *Check that the LapSnapper IP address is correct*
- *Check that the Wi-Fi service is available*

Email: support@lapsnapper.com
Internet: www.lapsnapper.com

APPENDIX A: TECHNICAL SPECIFICATION OF LAPSNAPPER MAGNETIC STRIPS

FEATURE	VALUE
LapSnapper Magnetic Strip 1.8 m	
• Maximum Transponder detection height • Size (W x H) • Length (3 pcs LapSnapper Magnetic Strip Module 0.6 m)	100 mm * 10 x 30 mm 1.8 m
LapSnapper Magnetic Strip Module 0.6 m	
• Maximum Transponder detection height • Size (W x H) • Length	100 mm * 10 x 30 mm 0.6 m
Other	
• Warranty	12 months

* 130 mm with double LapSnapper Magnetic Strips

Email: support@lapsnapper.com
Internet: www.lapsnapper.com

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